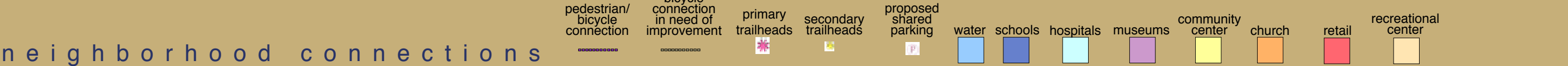
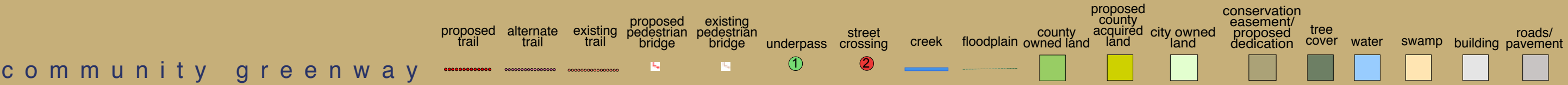


# THE GREENWAY MASTER PLAN

consists of three companion maps





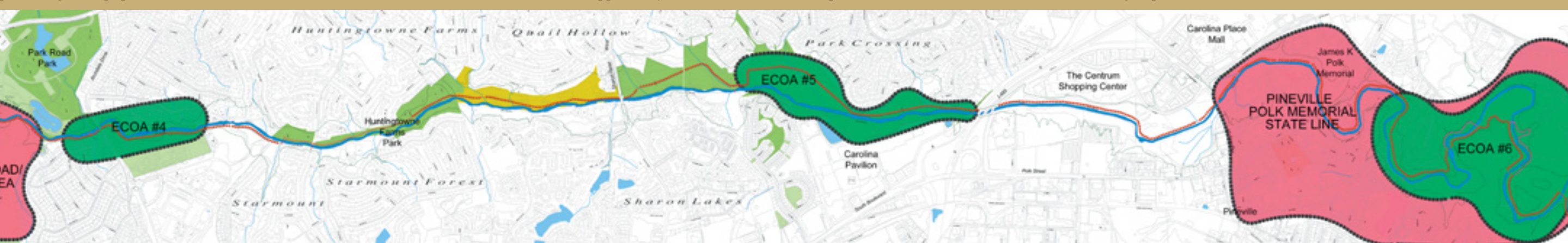
The Community Greenway Map is the basic greenway map which locates the primary greenway trail from Cordelia Park to the North Carolina / South Carolina line. The map illustrates which side of the creek the trail should be located, county property ownership, street crossing designations, and locations of pedestrian bridges.



The Neighborhood Connections Map illustrates how people can get to and from the greenway. It identifies linkages into neighborhoods, schools, hospitals, shopping, parking, uptown, public transportation. It also identifies places where there would be alternate trails to ensure accessibility and to create options which connect important landmarks with the greenway. This map also recommends where there could be road, bicycle and streetscape improvements which would enhance the greenway system. This map identifies primary and secondary trails and trailheads.



The Opportunity Areas Map locates places along the greenway that have one of two types of opportunities: 1) economic development or increased activity areas or 2) environmental conservation opportunity area. Economic development/ increased activity areas are places along the greenway that will have a mutually beneficial relationship to the greenway which could spur economic growth opportunities or an increase in activities similar to those found in a park. These areas have been studied and we are presenting concept plans in this document under the each reach. Environmental Conservation Opportunity Areas are areas that merit protection and conservation due to their existing or potential natural elements and character.





In a city, a public space can be an asset or a liability. A main street or a park can be a symbol of a neighborhood’s vitality and character, or an emblem of its disorganization and poverty of spirit. When it is an asset, it takes on the neighborhood’s identity, becoming its star attraction and raising the quality of life, and property values, for

residents. Project for Public Spaces.

# REACHES

The Greenway Master Plan chapter describes the greenway master plan in detail reach by reach. The map to the right identifies the reach boundaries for the Little Sugar Creek Greenway. Each reach is discussed in detail beginning on page 32 in the following manner: the existing creek and neighborhood character are described; the basic trail location is identified on the community greenway map; the recommended components for that reach are listed, quantified, and identified on the neighborhood connections map; and overall infrastructure improvements for the area are recommended (which are not necessarily a part of the greenway trail, but will enhance its use as a system.) Major road crossings are the boundary markers between reaches. As the reaches are described, and components listed, the boundaries begin with the inclusion on the most northern intersection (boundary), and end before the intersection designating the other boundary of the reach.

## Definition of a Reach

n. The extent or distance something can reach. Range or scope of influence or effect.  
An expanse: a reach of prairie; the lower reaches of the food chain.

Nautical. The tack of a sailing vessel with the wind abeam.  
The stretch of water visible between bends in a river or channel.  
(www.dictionary.com)

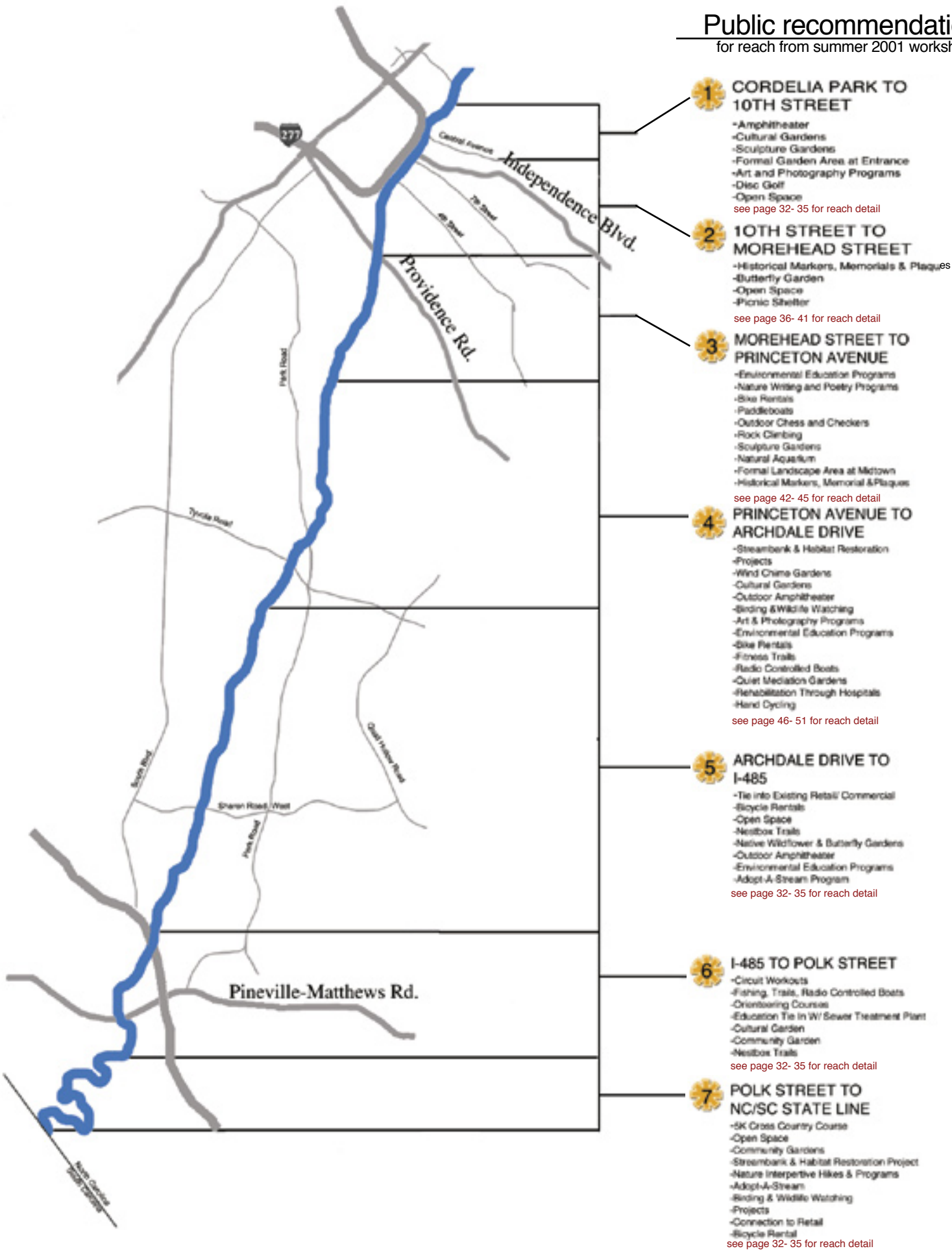
## Reaches for Little Sugar Creek

The separation, or definition of the reaches started to evolve during the summer 2001 workshop series. During one of the workshop sessions, the programming of the greenway was addressed and as it was discussed it became apparent there were certain “stretches” along the greenway where some activities would be more appropriate than others.

Through the recent planning process of the Little Sugar Creek Master Plan, the division of the reaches was further refined with an understanding of the creek’s unique characteristics and constraints in certain areas based on its morphology, adjacent land use patterns and road separations.

The map to the right identifies the reaches along Little Sugar Creek. There are a total of seven reaches from Cordelia Park to the NC/SC state line, which are listed on the right side of the map. Under each reach is a list of the programming opportunities that were identified by the public in the Summer 2001 Workshop Series. These opportunities have been incorporated in the Master Plan for each reach if feasible.

## Public recommendations for reach from summer 2001 workshops



# DESIGN COMPONENT DEFINITIONS

Listed below are the components found in each reach. On this page they are briefly described and the criteria for quantifying them is included. Some of these components are described in more detail in the design guidelines section, if this is the case the page number to that section is listed. Additionally, these components were used to establish a preliminary planning cost estimate for each reach. The cost estimate can be found in the appendix on page 81. If there is a symbol which relates to the master plan maps, it is illustrated to the left of the component definition.

## Trail Improvements



**Primary Trail-** The main greenway trail system located in the floodplain of Little Sugar Creek. The trail varies in width and material from a 10-14 foot wide asphalt in most locations, to a 15 foot concrete or other material in urban conditions, to a 10 foot boardwalk in sensitive areas. (See page 66 for design guidelines.)



**Secondary Trail-** Paths which connect neighborhoods, streets, and points of interest to the primary greenway trail. These trails vary in their conditions: some are on existing concrete sidewalks; others are proposed 8 foot wide asphalt paths. (See page 67 for design guidelines.)



**Alternate Trail-** Optional trail route for the purpose of ADA accessibility or to provide alternate route for lack of an ideal route. Alternate trails may need streetscape, sidewalk and bicycle route improvements. The alternate trails are not a part of the main greenway trail system and therefore are not included in the cost estimate. (See page 67 for design issues.)



**Primary Trailhead-** A main entrance onto the greenway. It would include landscaping, signage, parking, secondary trail to greenway trail, bike racks, and bollards. (See page 69 for design guidelines.)



**Secondary Trailhead-** A secondary entrance onto the greenway. It would include minimal landscaping, signage, secondary trail to greenway trail, and bollards in most locations. (See page 69 for design guidelines.)



**Pedestrian / Bicycle Connection-** Existing sidewalks and streets which could be used to access the greenway trail for pedestrians or bicyclists which fall into one or more of the following categories: it is designated on the “Bicycle Suitability Map” for Mecklenburg / Union County as a bicycle route (could be proposed, signed, widened shoulder, or bike lane); suggested by members of Bicycle Advisory Committee to provide route; it is a major or minor thoroughfare; it connects to major attractions (i.e. shopping malls, schools, historical sites, hospitals, etc.); and/or it is a major connection from the greenway to transit and vice versa. There is not a cost associated with this component.



**Pedestrian / Bicycle Connection in Need of Improvement-** Existing sidewalks and streets which need to be improved for greenway access. The improvements might include any of the following: in need of continuous sidewalk; in need of sidewalk; in need of barrier separation from vehicular traffic; removal of obstructions in bike or pedestrian path (i.e. utility poles, fencing, private property, or vegetation); in need of universal accessibility; and/ or in need of crosswalks / warning signage. The Plan Components, which are described in the following pages by reach, list a linear footage of sidewalk improvements needed for the primary greenway trail, greenway connections are not included in the linear footage amount. This component is not included in the cost estimate.



## Pedestrian & Vehicular Crossings

**Underpass-** The greenway trail crosses a road with a trail underpass and an at grade connection. This is considered the ideal crossing solution, although further feasibility studies would need to be conducted during the design development phase for each reach. (One exception to the ideal solution is Interstate 485 where the trail passes under the crossing only.) The cost estimate also considers the need for grading, drainage, structural walls, stairs / ramps, safety lighting, warning signage, handrail, possible barriers, boring, and possible aesthetic enhancements.



**Street crossing-** The greenway must cross at street level due to constraints. The cost estimate accounts for signs, curb / walk modifications, speed table / special paving, and landscaping.



**Pedestrian bridges-** Crossings over Little Sugar Creek. Red bridge symbols depict proposed crossings, while brown bridge symbols represent existing crossings.



**Pedestrian bridge improvements-** The Greenway Master Plan recommends that both existing and proposed pedestrian bridges be visually enhanced. (See page 72 in Design Guidelines.)

## Structures

**Welcome Center-** Greenway welcome center located close to the North Carolina / South Carolina state line. (See page 76-77 in Design Guidelines).

**Picnic Shelter-** Covered shelter that could be used for picnics or outdoor classrooms.

**Concession / Restroom-** Facility that could rent bicycles, sell food or drink, and house restroom facilities. (See page 76-77 in Design Guidelines)

## Furnishings & Fixtures

**Drinking Fountains-** 1 per reach located at primary trailhead. 2 in urban reach (10th to Morehead).

**Benches-** Quantified by locating 1 per 500 feet and at primary entrances. In the urban areas (10th to Morehead) 1 bench every 200 feet has been allotted.

**Trash Receptacles-** Located at primary entrances, shelters, and every 1000 feet. Every 500 feet in urban reach.

**Bike Racks-** Located at every primary trail head.

**Safety Phones-** Located in isolated areas (identified on neighborhood connection maps.)

**Bollards-** Included in primary and secondary entrances.

**Pedestrian-scaled Lighting-** in urban areas

**Safety Lighting-** lighting for underpasses included in Street Crossings

## Signage- see appendix for signage design

(entrance signage included under trail system, signage should be combined where possible to eliminate sign clutter)

**Way-finding Signage-** (identification, directional)

**Informative Signage-** (Historical, environmental, educational)

**Regulatory Signage-** (Greenway trail etiquette)

**Mile Marker-** every 1/4 mile

**Kiosk-** at every primary trailhead

## Other

**Amphitheater**

**Fountains / Pools**

**Public Garden** - Educational /

Environmental Garden/

Sponsorship Gardens

**Ornamental Ponds**

**Play Equipment**

**Open Space**



# CORDELIA PARK TO 10TH STREET



## Existing Creek Condition

This stretch holds a large section of completed greenway trail. The creek is completely uncovered, except for perpendicular street crossings. The creek in this area has flooded the adjacent properties many times. In fact, in 1997 the CSX bridge at Seigle Avenue washed away dumping a passing train into Little Sugar Creek as Mecklenburg County felt the effects of hurricane Danny.

A portion of this reach has been designated as an Environmental Conservation Opportunity Area (ECO A 1, see page 16). The county has acquired many properties as part of a County floodplain acquisition program, opening up the floodplain to restoration design opportunities.

This reach has recently received a fair amount of attention:

- Belmont Revitalization Plans 2002
- Belmont Avenue Environmental Restoration Initiative, Storm Water Services, preliminary plan 2002
- Cordelia Park Plan, completed 2000
- Little Sugar Creek Greenway (Phase 1a), plans completed 2001, construction complete 2002
- CXS Crossing for Little Sugar Creek Greenway
- Piedmont Courts Redevelopment Plans (pending)

## Neighborhood Relationship

Belmont, Villa Heights, and Optimist Park are adjacent neighborhoods. This stretch would be the entranceway on the greenway for several other surrounding neighborhoods as well: North Davidson, Plaza Midwood, Commonwealth Morningside, Chantilly and First Ward. The existing greenway serves as a neighborhood park to the adjacent neighborhoods at present. There is a community outdoor pool in Cordelia Park.

The neighborhood has significant historical importance. The area was originally part of the plantations of the Phifer & Rosedale families. There was also a county reservoir located not too far from the beginning of the proposed greenway. Cotton mills and mill villages are sprinkled along the path of the railroad and the creek (see History Chapter page 4). The Norfolk Southern passed right along the creek as it traveled south. There are three schools nearby, Villa Heights Elementary School, Hawthorn Traditional High School and Piedmont Open Middle School. These schools need to have safe and direct access to the greenway.

## Landmarks

- Alpha Mill
- Louise Mill
- Cordelia Park & Community Pool
- Rosedale Plantation
- McGill Rose Garden
- Old Hand's Pharmacy Building
- North Davidson via future greenway connection

## Thoroughfares

- Parkwood Avenue- Major Thoroughfare
- Davidson Street- Minor Thoroughfare

## community greenway

scale 1"=1000'





# plan components

- Trail Improvements** (6150 LF of Trail)  
4400 LF Existing 10' Asphalt Primary Trail  
1750 LF Proposed 10' Asphalt Trail  
3490 LF of Sidewalk Improvements  
820 LF Secondary Trail
- 1 Primary Trailhead  
21 Secondary Trailheads

- Signage**  
Way-Finding Signage  
Informative Signage  
Regulatory Signage  
Mile Markers  
1 Kiosk

- Landscaping**  
Trail Enhancement- Aesthetics

- Pedestrian & Vehicular Crossings**  
2 Underpasses  
3 Street Level Crossings
- Pedestrian Bridges**  
4 Existing Pedestrian Bridges  
3 Pedestrian Bridge Improvements
- Vehicular Bridge Improvements**  
Parkwood Avenue

- Structures**  
1 Picnic Shelter  
1 Concession / Restroom
- Furnishings & Fixtures**  
1 Drinking Fountain  
11 Benches  
6 Trash Receptacles  
1 Bike Rack
- Other**  
1 Amphitheater  
3 Educational / Environmental / Sponsorship Garden  
1 Ornamental / Water Quality Pond
- Land Acquisition**  
5435 LF County Owned Land  
715 LF Land to be Acquired

# neighborhood connections





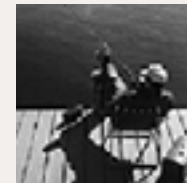
## Proposed Reach Character

The greenway in this section will reflect the ecological importance of the creek system. The existing trail is 10' wide asphalt path which will remain. The improvements would be composed of ecological and aesthetic enhancements consisting of naturalized plantings, water quality ponds and demonstration gardens.

In conjunction with the McGill Rose Garden, there should be a sponsored garden along the greenway and a secondary trail to connect this landmark and greenway users.

Around 17th Street and Alexander Street and 12th and Piedmont Courts there will be space allocated for Hawthorne Traditional Jr. High School and Piedmont Open Middle School to design and build an educational garden. The area around 17th Street will also have a picnic shelter to serve as a covered outdoor education structure.

If the Hope VI grant is awarded to Charlotte to revitalize the Piedmont Courts Apartments the opportunity



exists to create a vibrant relationship between Little Sugar Creek Greenway and the revitalized Piedmont Courts.

There are both primary and secondary entrances along this stretch, which are currently designed in line with the Park and Recreation standards. They should be up-fitted to the Little Sugar Creek Greenway Master Plan Design Guidelines for Primary and Secondary Trailheads. The existing pedestrian bridges should be up-fitted according to the Greenway Master Plan Guidelines.



# cordelia neighborhood park opportunity area

The greenway design in this area should reflect the character of the surrounding neighborhoods, history and the nature of this reach designation as the symbolic “headwaters” of the Little Sugar Creek Greenway. In this reach the increased activity opportunities are married with the environmental conservation opportunities. The illustration is an amendment to the current master plan for Cordelia Neighborhood Park, incorporating that design with a design which addresses the goals of the greenway master plan.

The design would blend many attributes: a variety of off-line water quality ponds to improve the health of the creek system, reduce flooding problems and increase natural habitats for aquatic life. An off-line pond, located at the entrance to the greenway would serve as the symbolic headwaters to Little Sugar Creek, historic reference to the ponds that use to exist in this area, as well as, a neighborhood amenity to use for fishing and education. An open air structure, with a deck over looking pond, would serve as a picnic and sun shelter as well as an historic interpretive center, as people begin their journey on the greenway.



**Section AA- Proposed Open Air Structure and Pond**  
the most northern starting point on the greenway



**Section BB- Creek Cross-section**  
a natural neighborhood amenity





# 10TH TO MOREHEAD



36



## Existing Creek Condition

The creek has been significantly altered from its original state. It is prone to flooding, it has been channelized and is buried in several places. Approximately 4600 LF of creek is buried in this reach, over half of the length of the reach.

The county has been pursuing land acquisition in this area, and has acquired +/-740 LF of the total +/- 8800 LF, and are in the process of acquiring another 2820 LF. CPCC & Midtown and are dedicated to developing a positive relationship to the greenway, and should not impede the greenway implementation process.

## Neighborhood Relationship

The creek is surrounded by a mixture of land uses in this stretch, including: educational, office, retail, park, the historic Cherry neighborhood and vacant properties. In the places where the creek is not covered it is surrounded by scrub and exotic invasive vegetation.

The average building distance from the creek at present is approximately 60 feet, and the minimum distance of a building from the creek is 25 feet. This is the most urban reach of Little Sugar Creek.

## Landmarks

The presence of CPCC and Midtown Mall give this stretch a mixed-use, urban-college atmosphere. The presence of uptown directly to the north also is an influential element in its “urban” character.

## Thoroughfares

This stretch is dissected on its northern beginnings by a conglomeration of highways and city roads: 10th Street defines its boundaries, which is followed by Independence Boulevard and I-277 on its western edge. It has a total of 6 intersections with city streets, from 7th to Morehead, and is constrained on its western side by King Street. Major thoroughfares include: 10th Street, 7th Street, Trade/Elizabeth Street, 4th Street, 3rd Street ending with Morehead Street.

## plan components

### Trail Improvements (9500 LF of Trail)

6500 LF 15' Primary Trail  
3000 LF Sidewalk Improvements  
8400 LF Alternate Trail

2 Primary Trailheads  
14 Secondary Trailheads

### Signage

Way-finding Signage  
Informative Signage  
Regulatory Signage  
Mile Markers  
2 Kiosks

### Landscaping

Trail Enhancement

### Lighting

Pedestrian-scaled Lighting

### Pedestrian & Vehicular Crossings

4 Underpasses  
3 Street Level Crossings

### Vehicular Bridge Improvements

Trade Street, 4th Street & 3rd Street

### Furnishings & Fixtures

2 Drinking Fountains  
33 Benches  
13 Trash Receptacles  
2 Bike Racks

### Other

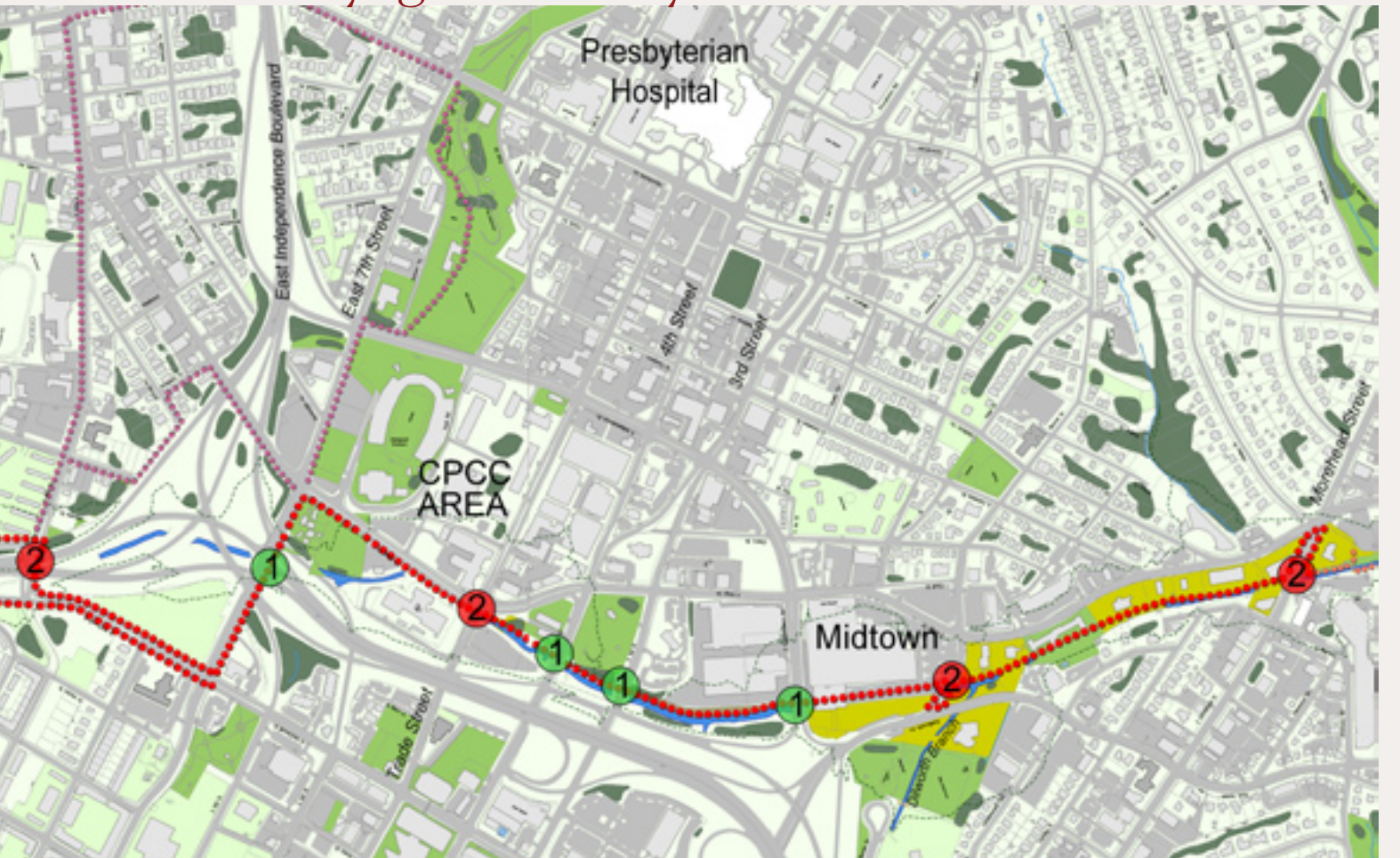
1 Amphitheater  
4 Fountains / Pools  
1 Pond

### Land Acquisition

740 LF County-owned Land  
8060 LF Land to be Acquired  
by County

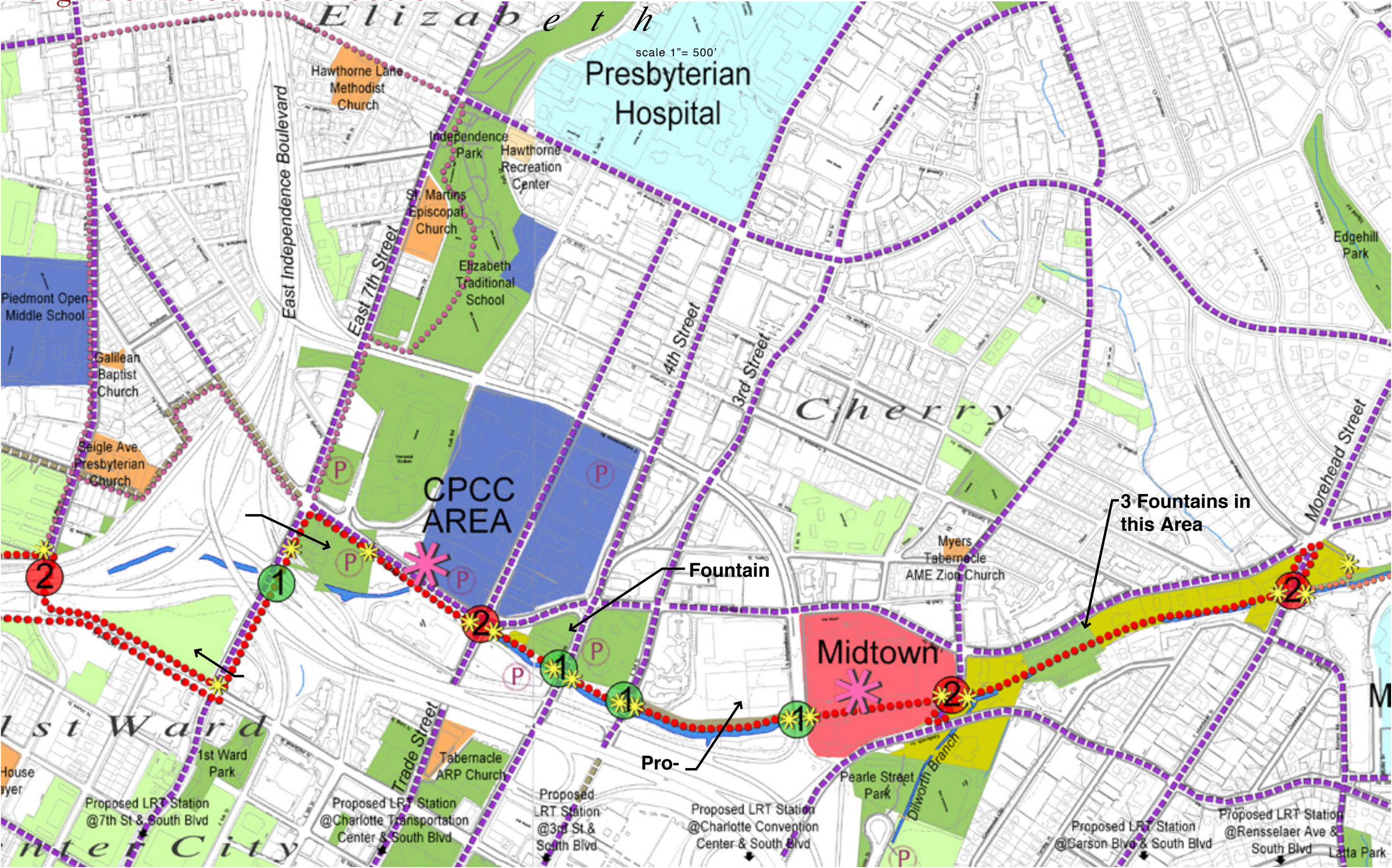
## community greenway

scale 1"= 1000'

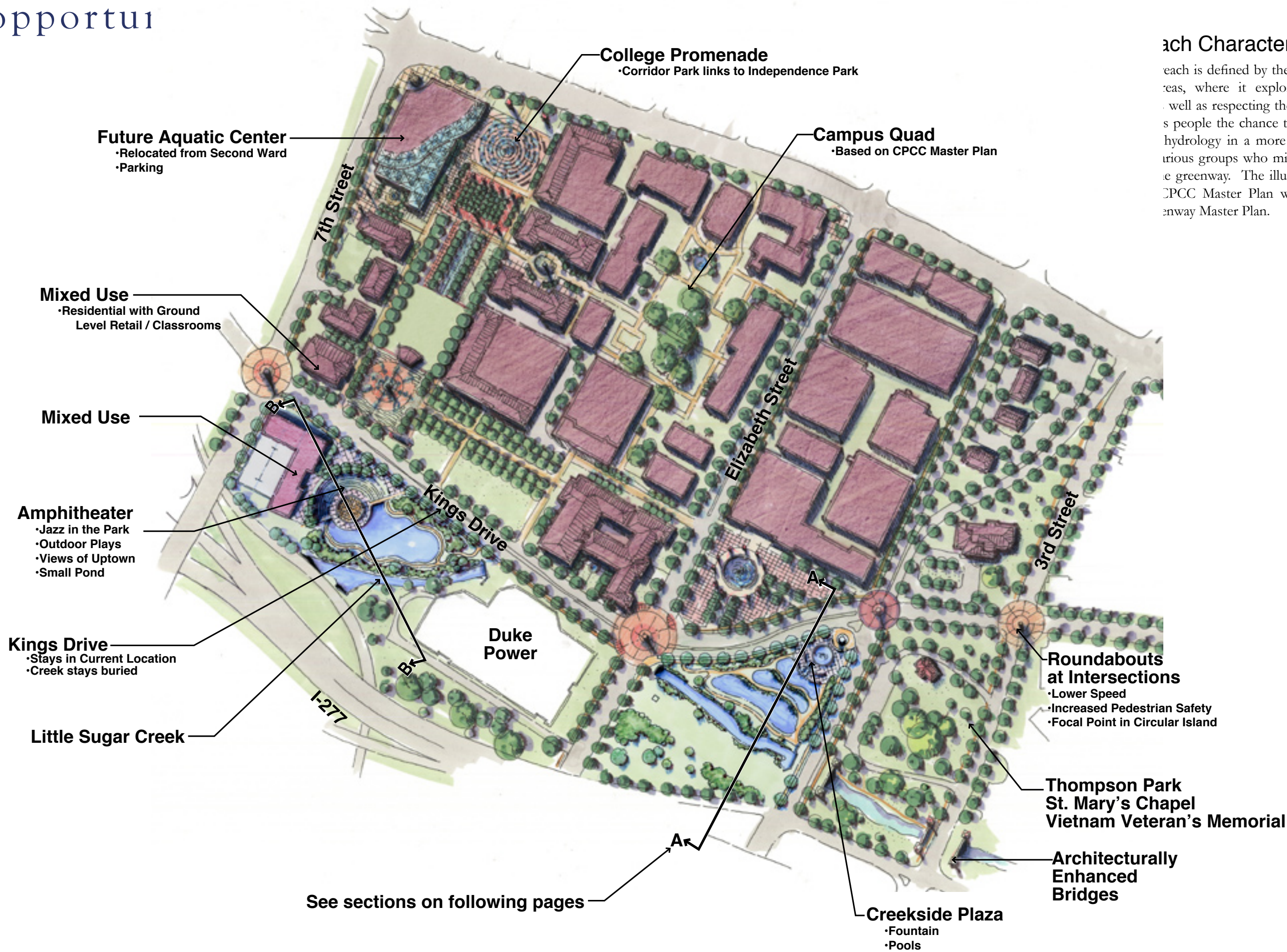




neighborhood connections







ach Character

each is defined by the nature  
reas, where it explores the  
well as respecting the urban  
s people the chance to enjoy  
hydrology in a more formal  
rious groups who might not  
e greenway. The illustration  
CPCC Master Plan with the  
enway Master Plan.

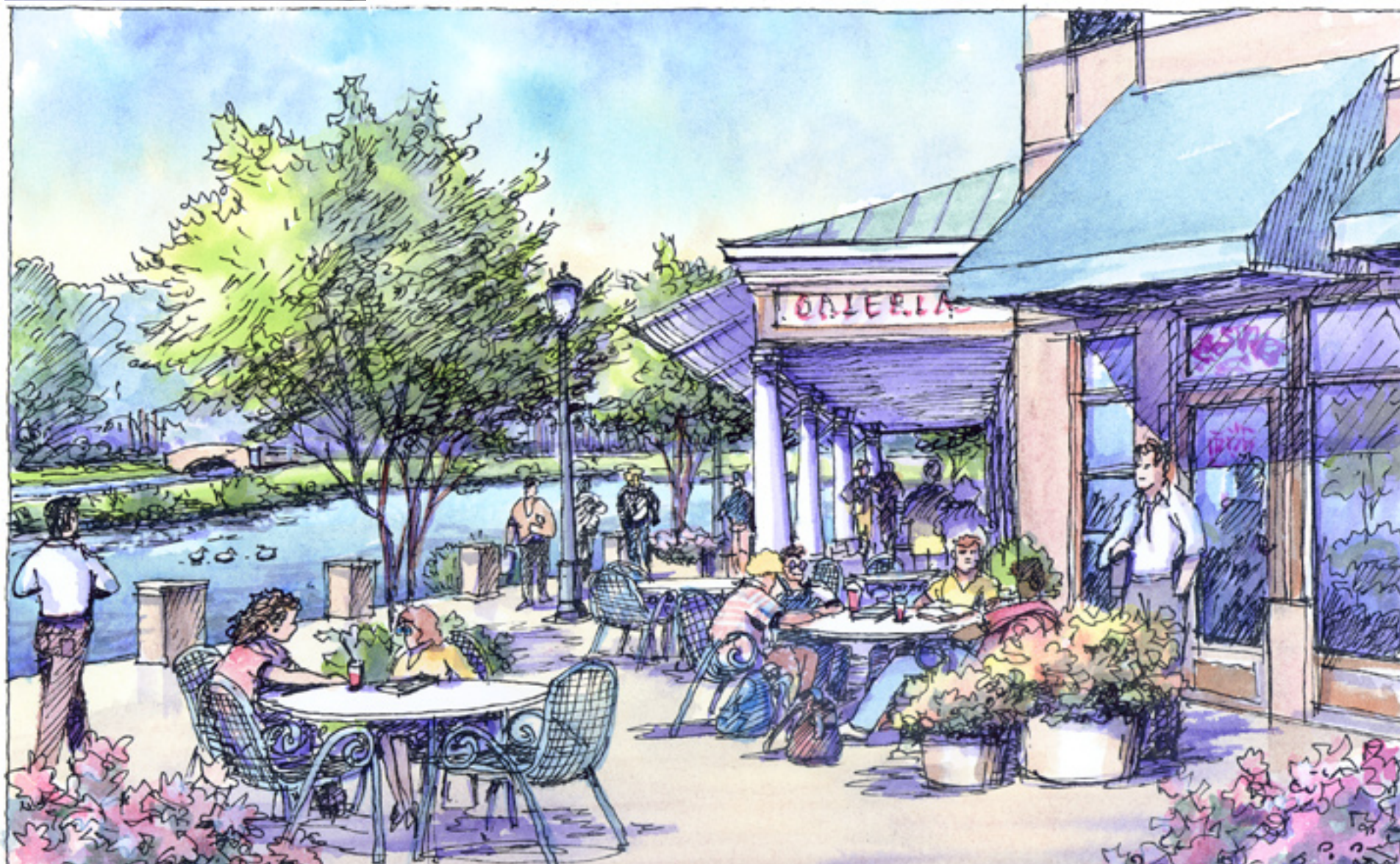




**Section AA- Creekside Plaza with stepped pools at 4th and Kings Drive.**



**Section BB- Amphitheater surrounded by small pond at corner of 7th & Kings Drive.**



CPCC Opportunity Area encompasses the general area around property owned by the Central Piedmont Community College, from Independence Boulevard to Little Sugar Creek, and from 7th Street to 3rd Street. While many of the improvements shown are based on the CPCC Master Plan, additional greenway and streetscape improvements are also illustrated on property not owned by CPCC, including the addition of urban plazas and building frontage on the creek and the streets to increase the pedestrian appeal and connectivity between the college, the greenway, and Uptown.

A “partnership” between Mecklenburg County Park and Recreation and CPCC would create the opportunity to develop a signature park for the county and college. Improvements in the streetscape should include decorative and pedestrian safety enhancements on the vehicular bridges on 3rd and 4th Streets. This would help identify the presence of the greenway, enhance walkability, visually connect this area to Uptown, and improve the overall appearance of the college area. Another improvement shown on the CPCC illustration includes placing roundabouts or structures in the intersections. This would also greatly improve the aesthetic appeal of this area, as well as foster pedestrian street crossing, and help to slow traffic. The streetscape would be lively with pedestrians, outdoor cafes and restaurants, bicycles, vendors, and the reappearance of the forgotten creek.

The potential dynamism of this reach of LSC Greenway would also play off of its connection to the Midtown and Kings Drive area, which has a similar urban character and location.

This perspective is illustrating off-line ponds, with Little Sugar Creek in the background.



# kings drive opportunity area



40

## Proposed Character

The Kings Drive and Midtown Opportunity Areas will be exciting and lively. The Midtown redevelopment would provide creek-front retail and restaurants with a residential component overlooking the creek and greenway. The greenway would link Pearl Street Park to the development and the adjacent Cherry neighborhood.



Section AA- Bridge Enhancements on Kings Drive





“Only by understanding the city as a part as part of nature can we deal with the wounds inflicted on it, mend its ways, and design its form so that it functions sustainably to satisfy needs without diminishing opportunities for future generations, ‘  
(Royal Commission on the Future of the Toronto Waterfront).



Section BB- Little Sugar Creek at proposed Midtown Development



The greenway along Kings Drive would be developed as an urban linear park. The design reflects Parisian-styled esplanades, which have beautiful fountains or striking artwork on their axes, with double rows of evenly spaced trees lining the formal 15-foot wide walk, and numerous benches for resting or people-watching. The character of this reach presents the opportunity to help fund the greenway through donations made in exchange for engraved bricks installed as edging or accents for the walkway.

The appeal of the greenway in this area could spur redevelopment on the east side of Kings Drive and the west side of Little Sugar Creek. This section of the greenway would be the place for Sunday afternoon outings, for leisurely strolls buying ice cream and wishing on pennies tossed in the fountain.

Another exciting opportunity this reach brings to the community is the interface of nature with the city; urban ecology can be explored in downtown Charlotte. Uncovering this reach of Little Sugar Creek would be an enormous step forward in improving the health and water quality of the creek.

Infrastructure Improvements

Bicycle and pedestrian improvements are needed along Central Avenue, Prospect Street, Jackson Avenue, and beside Independence for an alternate trail (See Neighborhood Connections Map).

Urban: Streetscape Improvements along Kings Drive

Utilities: Suggestion to burying utilities where feasible



# MOREHEAD TO PRINCETON



## Existing Creek Condition

This stretch of the creek was once similar to the 10<sup>th</sup> to Morehead reach, with channelized banks for much of its length. Currently, the stretch that runs through Freedom Park, from East Boulevard to Princeton Avenue, has received floodplain and stream restoration attention. The restoration work started in winter of 2002 and when it is completed, approximately 30 acres of aquatic and riparian habitat will have been restored.

The section of the creek between Morehead Avenue and East Boulevard, adjacent to Carolinas Medical Center, is still contained with hard edges. Severe physical constraints will limit updates to the greenway trail in this area. This is the first section of Little Sugar Creek Greenway to be named. It is the Liz Hair Nature Walk, as a tribute to Liz Hair. An fundraising effort has been undertaken by Mecklenburg County Park and Recreation and the Liz Hair Steering Committee to beautify and soften the edges of the greenway with new plantings, benches, and boulders and to aesthetically improve the existing pedestrian bridges.

## Neighborhood Relationship

Freedom Park makes this reach a destination point. It is one of the smallest reaches, but contains the largest amount of existing trail. People from across the county use this part of

the greenway, whether during lunch, after work, on the weekend, or during Freedom Park's many festivities. The greenway would provide many connections to this very significant area of Charlotte, which includes Carolina's Medical Center and the Dilworth and Myers Park neighborhoods.

## Landmarks

Carolinas Medical Center  
Freedom Park  
Nature Museum

## Thoroughfares

There are only three major roads that cross through this section of the greenway: Morehead Street at the north side, East Boulevard at the middle, and Princeton Avenue at the south end. Both Morehead Street and East Boulevard carry high volumes of traffic on a daily basis.

## community greenway scale 1"= 1000'



42

## plan components

### Trail Improvements (8200 LF trail)

6100 LF Existing Primary Trail  
2100 LF Proposed Primary Trail- 10' Asphalt  
200 LF Secondary Trail

1 Primary Trailhead  
7 Secondary Trailheads

### Signage

Way-finding Signage  
Informative Signage  
Regulatory Signage  
Mile Marker  
1 Kiosk

### Landscaping

(3550 LF between Morehead & East Boulevard)  
Trail Enhancement

### Pedestrian & Vehicular Crossings

2 Existing Underpasses  
1 Street Crossing at Morehead

### Pedestrian Bridges

6 Existing Pedestrian Bridges  
6 Pedestrian Bridge Improvements

### Vehicular Bridge Improvements

Morehead Street  
East Boulevard

### Furnishings & Fixtures

(3550 LF between Morehead & East Boulevard)  
1 Drinking Fountain  
7 Benches  
3 Trash Receptacles  
1 Bike Rack



neighborhood connections

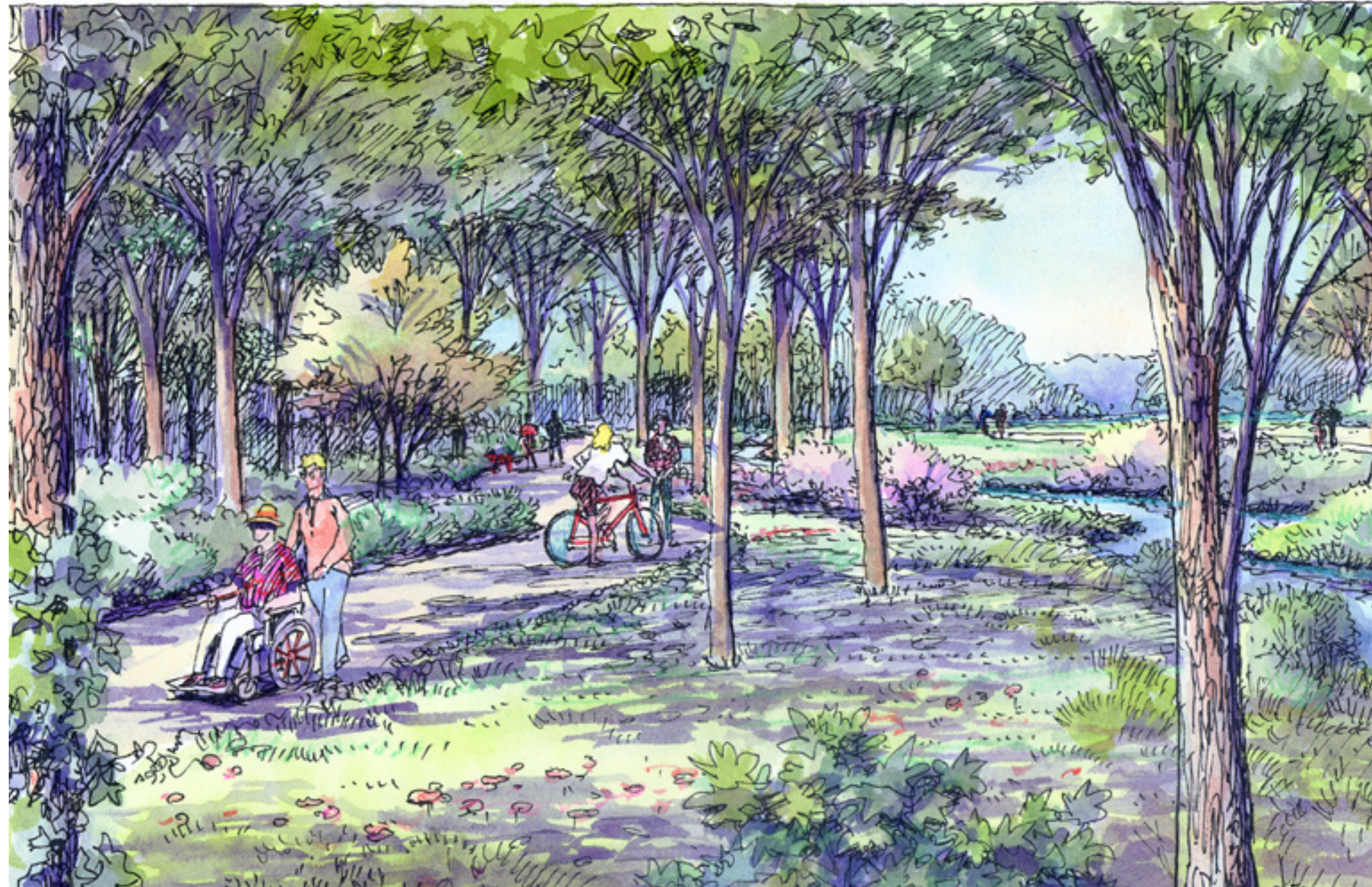
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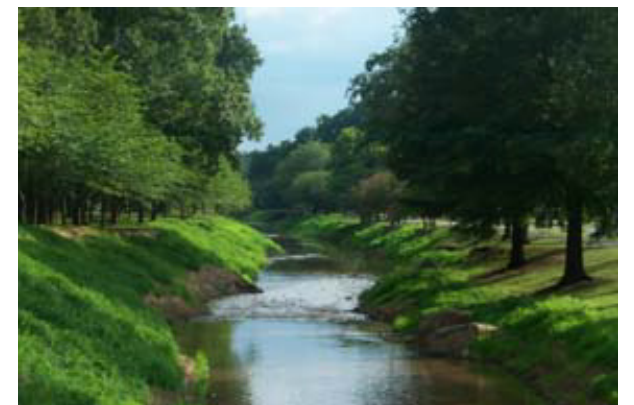
# freedom park opportunity area

44



## Proposed Reach Character

The character of Freedom Park will not be changed through this master plan. Freedom Park is seen as an opportunity area because it attracts a large number of people, and will naturally be used as a primary trailhead for the greenway. Freedom Park will continue to be used for a variety of passive and active recreation activities, such as tennis, field sports, walking, picnicking, running, and dog-walking to name a few. More environmental and ecological education activities will be available in partnership with Discovery Place at the adjacent Nature Center as the restoration is completed.



## Infrastructure Improvements

Bicycle / Pedestrian Improvements are needed along Wellesley Avenue.

Future development at Carolinas Medical Center may incorporate a second or parallel greenway trail located outside of the streamside zone. Currently, the trail is located inside the creek zone. Mitigate flash flood conditions that occur at the existing trail between Morehead Street and East Boulevard by establishing a secondary route along the west side of the creek near Carolinas Medical Center.





# creek restoration example

Creek/stream restoration is a component of floodplain management that aims restore the natural and beneficial functions of the floodplain, including improved water quality, enhanced aquatic and terrestrial habitat, improved aesthetics, better sediment transport, reduced water temperatures, increased groundwater infiltration, restored native vegetation and heightened awareness of our natural resources by public use of a greenway trail system. Additional benefits from a balanced design approach may include the reduction of damage caused by floods.

Developing the greenway and restoring the creek and floodplain functions will help meet the environmental goal of the greenway project: *Prepare a greenway master plan that protects floodplain lands and encourages the restoration of the natural hydrologic section and biodiversity of the creek to promote improved water quality.* This is possible through the partnership between the Mecklenburg County Park and Recreation Department and Charlotte-Mecklenburg Storm Water Services. Additional resources at state and federal levels have created a collaborative alliance that includes the North Carolina Wetlands Restoration Program, the North Carolina Division of Water Resources and the North Carolina Clean Water Management Trust Fund.

The Freedom Park ecosystem restoration project serves as a model of how this partnership works. Encompassing a new greenway trail and a restored creek, this project will be completed in 2004 and could be used as a showcase of the greenway collaboration process. This segment of Little Sugar Creek is the first of seven segments currently underway.

The principles of creek restoration are recent and were developed through empirical learning from past mistakes in dealing with streams. Navigable “waters of the US” fall under the jurisdiction of the United States Army Corps of Engineers. From the late 1800’s to the 1930’s and even later, waterways were altered by the Corps to achieve goals that included the creation of navigable waterways and “reclaiming” land from wetlands and swamps to create “more usable” land. In the 1950s, many creeks were polluted and degraded as a direct result of this treatment. In Mecklenburg County, the Mecklenburg County Health Department used chemical deodorizers to mask the smell of creeks in the region. The creeks could no longer support aquatic plant or animal life. As banks eroded and became unstable between the 1960s and 1995, rip rap and concrete were used to armor them. Starting in 1995, an understanding of creeks as living systems began to take root. Creeks began to be recognized as a natural resource and not simply a “drainage ditch.” This understanding has evolved into the science known as Natural Stream Design. Natural Stream Design uses data collected from naturally stable high quality reference streams, soils bioengineering, and an increased use of vegetation instead of rip rap, to treat the problems of erosion, habitat degradation, water quality, and flooding.

A

naturally stable stream channel is able to carry its sediment

load while maintaining its dimension pattern and profile over

time so that the stream neither aggrades or degrades. Dave Rosgen

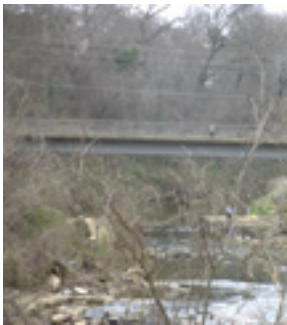
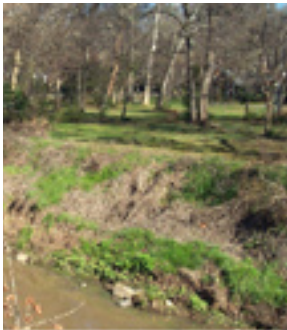
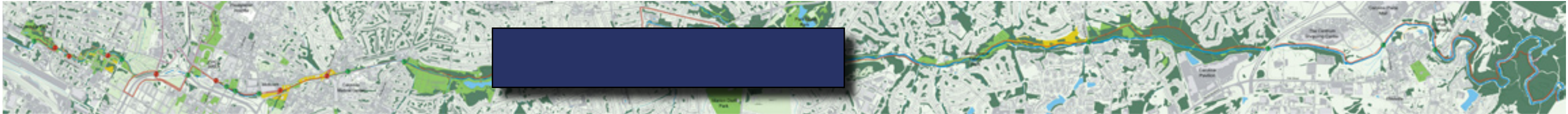
These photos were taken during the stream restoration project on Little Sugar Creek in Freedom Park and illustrate the steps and process of stream bank stabilization. The stream restoration project in Freedom Park can be used as a public education tool, giving the public an understanding of what to expect as the Little Sugar Creek Greenway is developed tangent with stream restoration projects.

1. Before restoration. 2-3. Restoration in progress. 5. Little Sugar Creek restored to a natural stream channel. Photos by HDR.





# PRINCETON TO ARCHDALE



## Existing Creek Condition

The reach of the creek from Princeton to Archdale in the Westfield area holds significant constraints in meeting the goals of the greenway trail, and has a history of property damage caused by flooding. The creek channel has been greatly altered from its natural course between Hillside Avenue and Brandywine Road around the 1920s. There were many structures built in the floodplain, and the creek banks have eroded and steepened. On a positive note, a significant amount of bedrock in the creek bed from Brandywine to Archdale results in nice ripples in this area. Also in this reach, Briar Creek and Little Hope Creek merge into Little Sugar Creek, which could provide great opportunities for connection to future greenways and educational opportunities in creek hydrology.

This stretch has been identified in the Upper Little Sugar Creek FEMA mitigation plan for both floodplain and stream restoration. Restoration efforts through the floodplain buyout program have led to the removal of 55 structures from Hillside to Brandywine. A three-mile stretch from Brandywine to Archdale is being designed through the USACE 1135 and 206 programs to restore the natural ecosystem and aquatic habitat.

## Neighborhood Relationship

This reach contains a diversity of land use patterns, including commercial, single and multi-family residential, institutional, open space, and industrial. Many neighborhoods such as Myers Park, Ashbrook, Clawson Village, Deering Oaks, Madison Park, and Parkdale border the creek. For residents of these neighborhoods, the greenway will provide not only open space, but also an alternate connection to significant parks and to the shops at Park Road Shopping Center and Park Selwyn Shopping. Park Road Elementary, St. Ann's Elementary, and Phifer University also directly benefit from the greenway.

## Landmarks

- Park Road Shopping Center
- Park Road Park
- Marion Diehl Park
- Charlotte-Mecklenburg Utilities Waste Water Treatment Plant

## Thoroughfares

In this reach the creek flows between Park Road and Selwyn Avenue to the east and west respectively. There are a total of seven street crossings in this reach. Woodlawn Road, Park Road, and Tyvola Road are classified as major thoroughfares. Both Woodlawn and Tyvola provide direct access from the trail to the proposed light rail stops along South Boulevard. All of the crossings have been designated to have the ability to put the trail under.

46

## community greenway

scale 1"= 1000'





# plan components

## Trail Improvements (26,600 LF trail)

11700 LF 10’ Asphalt Primary Trail  
14900 LF Sidewalk Improvements for Primary Trail  
1340 LF 8’ Secondary Trail  
3320 LF Future Trail

2 Primary Trailheads  
17 Secondary Trailheads

## Signage

Way-finding Signage  
Informative Signage  
Regulatory Signage  
Mile Markers  
2 Kiosks

## Landscaping

Trail Enhancement  
Park Planting

## Pedestrian and Vehicular Crossings

Street Crossings  
7 Underpasses

## Pedestrian Bridges

8 Proposed Pedestrian Bridges  
1 Existing Pedestrian Bridge  
9 Pedestrian Bridge Improvements

## Vehicular Bridge Improvements

Princeton/Hillside/Brandywine/Woodlawn/Park/Tyvola

## Structures

3 Picnic Shelters- Park Road Elementary/Confluence with Briar Creek/ CMU Property  
1 Concession / Restroom at CMU Property

## Furnishings and Fixtures

1 Drinking Fountain  
34 Benches  
18 Trash Receptacles  
2 Bike Racks  
1 Safety Phone

## Other

3 Educational / Neighborhood Garden  
3 Play Equipment Areas  
Informal Play Meadows - CMU Area  
Open Space

## Land Acquisition

1,672 LF County Owned Land  
13,000 LF Land to be Acquired by County

## Infrastructure Improvements

Between Woodlawn and Park Road the greenway trail will move away from the creek and follow public streets and street sidewalks (Selwyn Avenue & Park Road) until access along the creek is available through this segment. Improvements for pedestrian and bicycles along Park Road and Selwyn Avenue will be necessary.





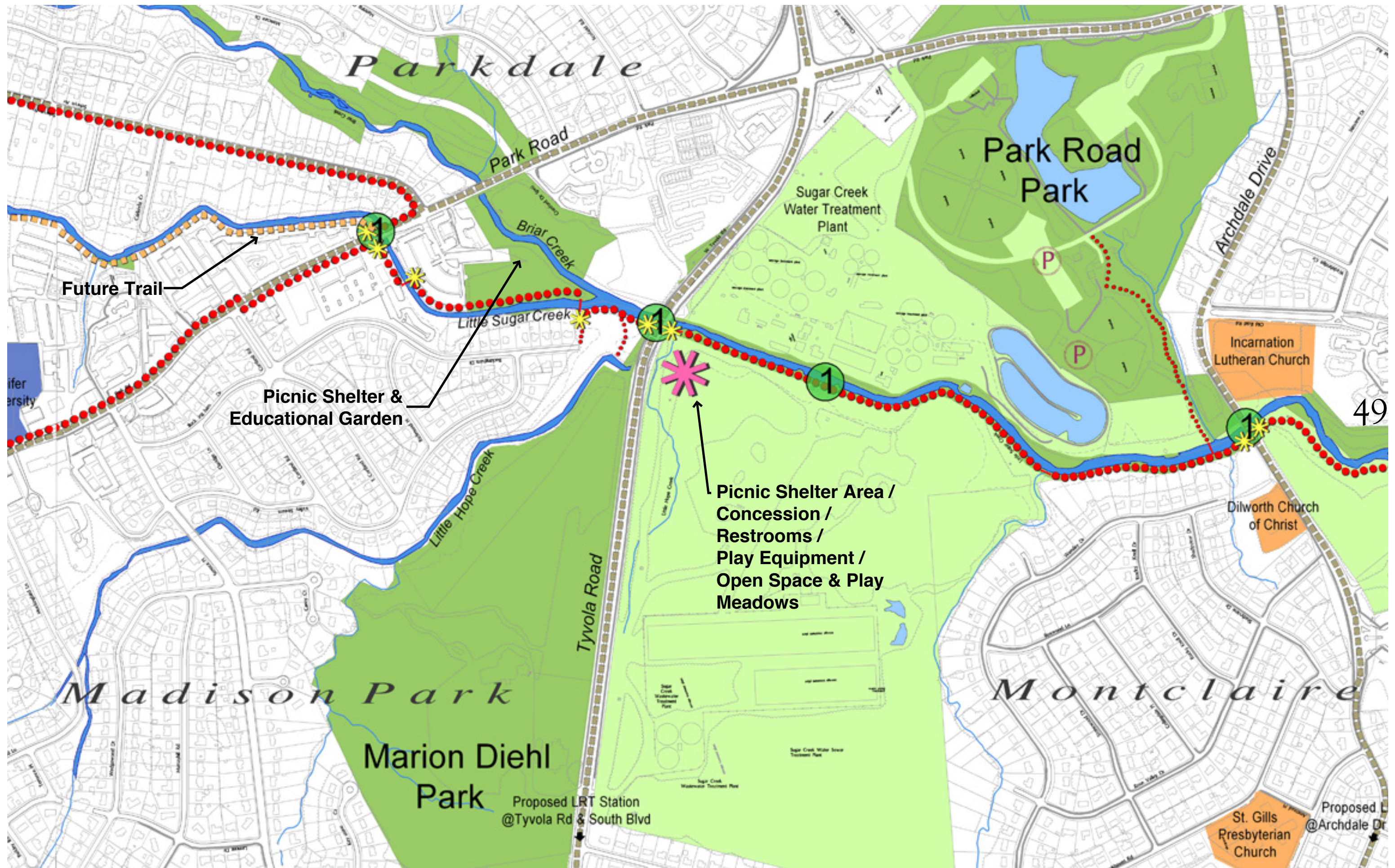
neighborhood connections

scale 1"= 500'

48







Future Trail

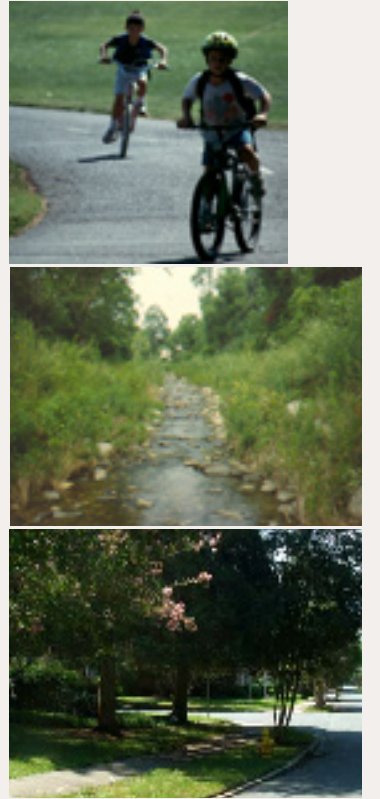
Picnic Shelter &  
Educational Garden

Picnic Shelter Area /  
Concession /  
Restrooms /  
Play Equipment /  
Open Space & Play  
Meadows

49



# westfield road opportunity area



50

## Proposed Reach Character

In this reach the greenway will become a unifying resource connecting neighborhoods with shopping and recreation. The creek will cease to be a barrier and become an aesthetically pleasing neighborhood amenity. It will provide areas of passive recreation, active recreation, natural habitats, and educational outdoor opportunities. Westfield Drive will be a place to walk your dog, observe nature, or just relax under a tree. The greenway should foster a relationship with Park Road Shopping Center, providing future creekside dining and retail opportunities.

The design should protect the 100-year floodplain and promote natural habitat for bottomland hardwoods and wildlife. The trail should be seriously respectful of existing trees, vegetation and the future stream restoration project.







## Proposed Opportunity Area Character

The Master Plan recommends the development of unused Charlotte Mecklenburg Utility Department property as a primary trailhead and park geared towards passive recreation, depending upon CMU phasing plans. The park and greenway trail and would be linked by secondary loop trails to Park Road Park and Marion Diehl Park. As a primary trailhead, the park would need to provide public parking for greenway users, a shelter with restroom facilities, and park features such as informal play meadows, children's play equipment, and a system of multi-use secondary trails.





# ARCHDALE TO 485



## Existing Creek Condition

The Huntingtowne Farms Park section of the creek has been reconstructed to address flood control, bank stabilization, habitat enhancement, and improved aesthetics. Farther down, the creek has a very broad floodplain with a large area of bottomland hardwoods. This part of the creek has some of the most diverse aquatic habitats found in Mecklenburg County.

## Neighborhood Relationship

This reach is bordered almost entirely by residential neighborhoods, with the exception of Carolina Pavilion Shopping Center. The neighborhoods consist of Huntingtowne Farms, Starmount, Starmount Forest, Quail Hollow, Sharon Lakes, and Park Crossing. The character is suburban with a few commercial areas along major thoroughfares. The area already has a part of the trail in place, which is very successful.

## Landmarks

Huntingtowne Farms Park  
Carolina Pavilion Shopping Center

## Thoroughfares

Major roads Archdale Drive and Sharon Road West cross the trail on bridges, with the trail passing underneath. Both Archdale Drive and Sharon Road West provide direct access from the trail to the proposed light rail stops planned to occur along South Boulevard near those thoroughfares.

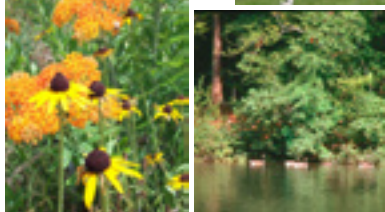
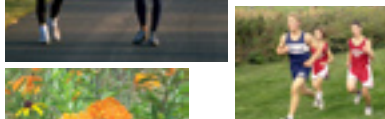
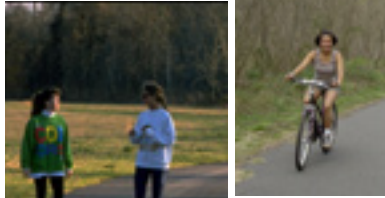
52

community greenway

scale 1"= 1000'





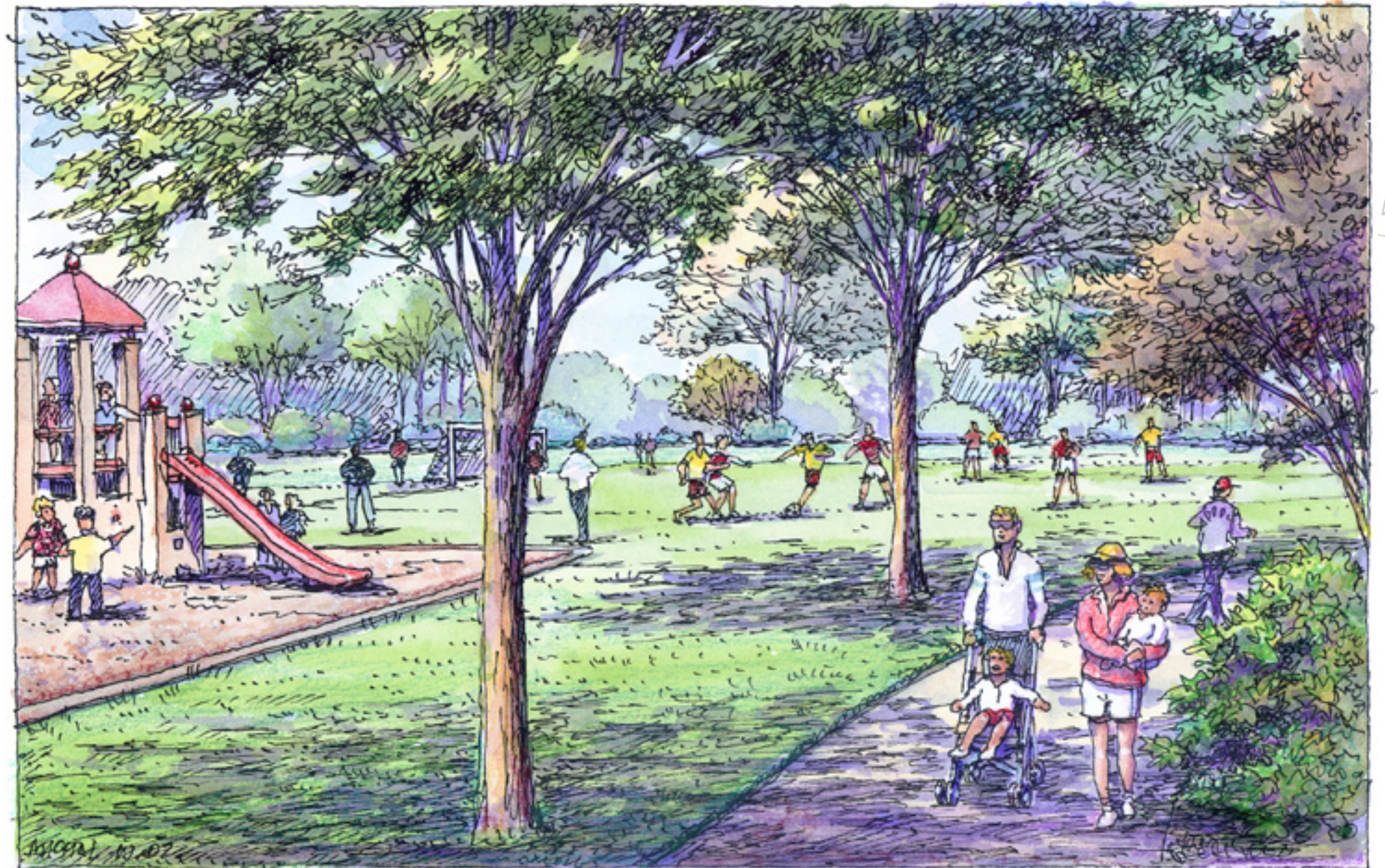


## Proposed Reach Character

The character of this reach is similar to the previous one, Princeton to Archdale, with passive and active recreation opportunities. The greenway will serve as a link to amenities outside of the reach, like Park Road Shopping Center, Park Road Park, and Carolina Place Mall for example.

For residents who live near the creek in this reach, the greenway will act as a linear neighborhood park, offering areas for families to play, ride bicycles, and meet with friends.

This has been identified to be Environmental Conservation Opportunity Area 5 (see page 16 and 17), due to its broad floodplains. There are several areas that have natural and reconstructed wetlands. A huge educational opportunity is available for all ages to learn about wetland habitat, the effects wetlands have on water quality, monitoring the success of the constructed wetlands to evaluate wetland construction techniques.



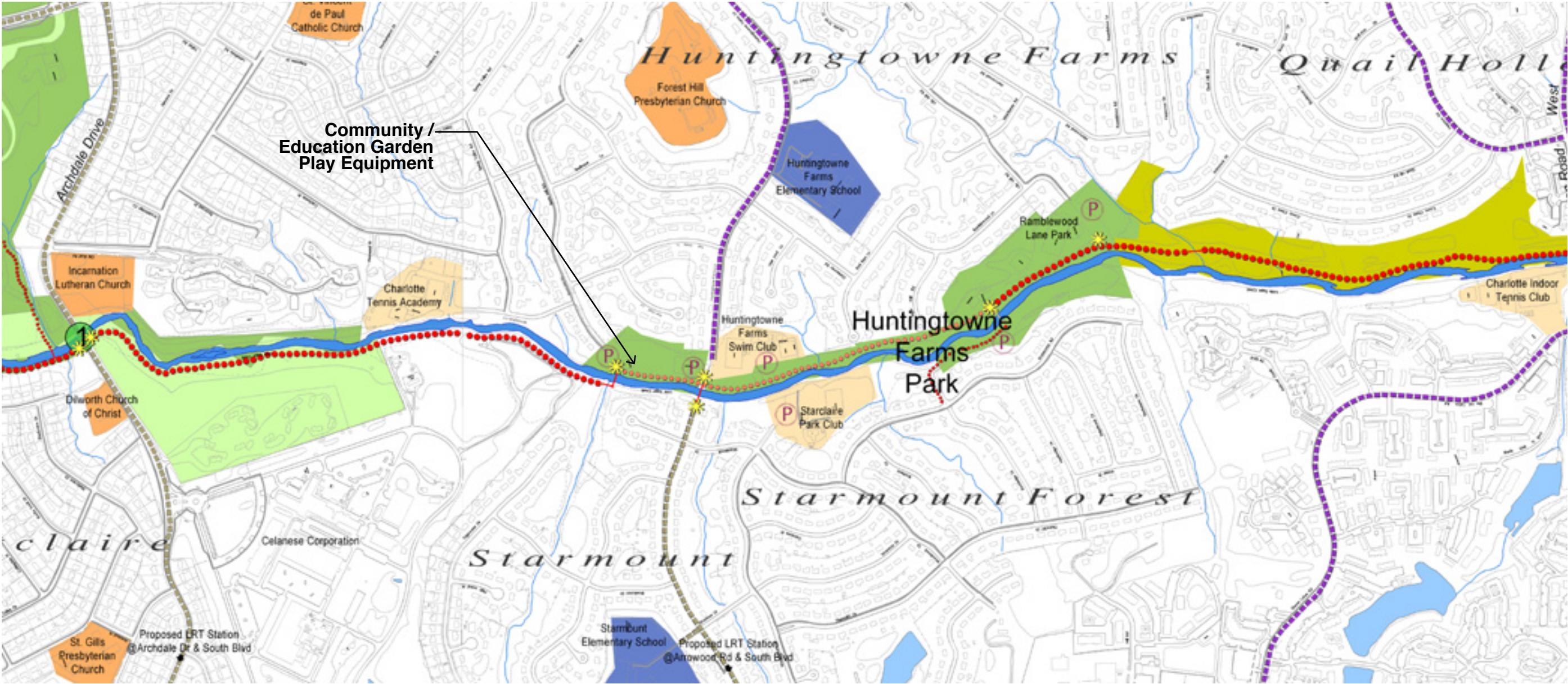


neighborhood connections

scale 1"= 800'

“A park and its surrounding area can be not only a place to understand and relate to nature, but it can also be a place for social and cultural exchange” Project for Public Spaces.

54





# plan components

- Trail Improvements** (20,000 LF Trail)
- 17200 LF 10' Asphalt Primary Trail
  - 2800 LF Existing Primary Trail
  - 6400 LF Secondary Trail
  - 3280 LF Secondary Trail- Running Path
- 1 Primary Trailhead  
12 Secondary Trailheads

- Signage**
- Way-finding Signage
  - Informative Signage
  - Regulatory Signage
  - Mile Marker
  - 1 Kiosk

- Landscaping**
- Trail Enhancement
- Pedestrian & Vehicular Crossings**
- Street Crossings
  - 2 Underpasses

- Pedestrian Bridges**
- 5 Pedestrian Bridges
  - 1 Existing Pedestrian Bridge
  - 6 Pedestrian Bridge Improvements

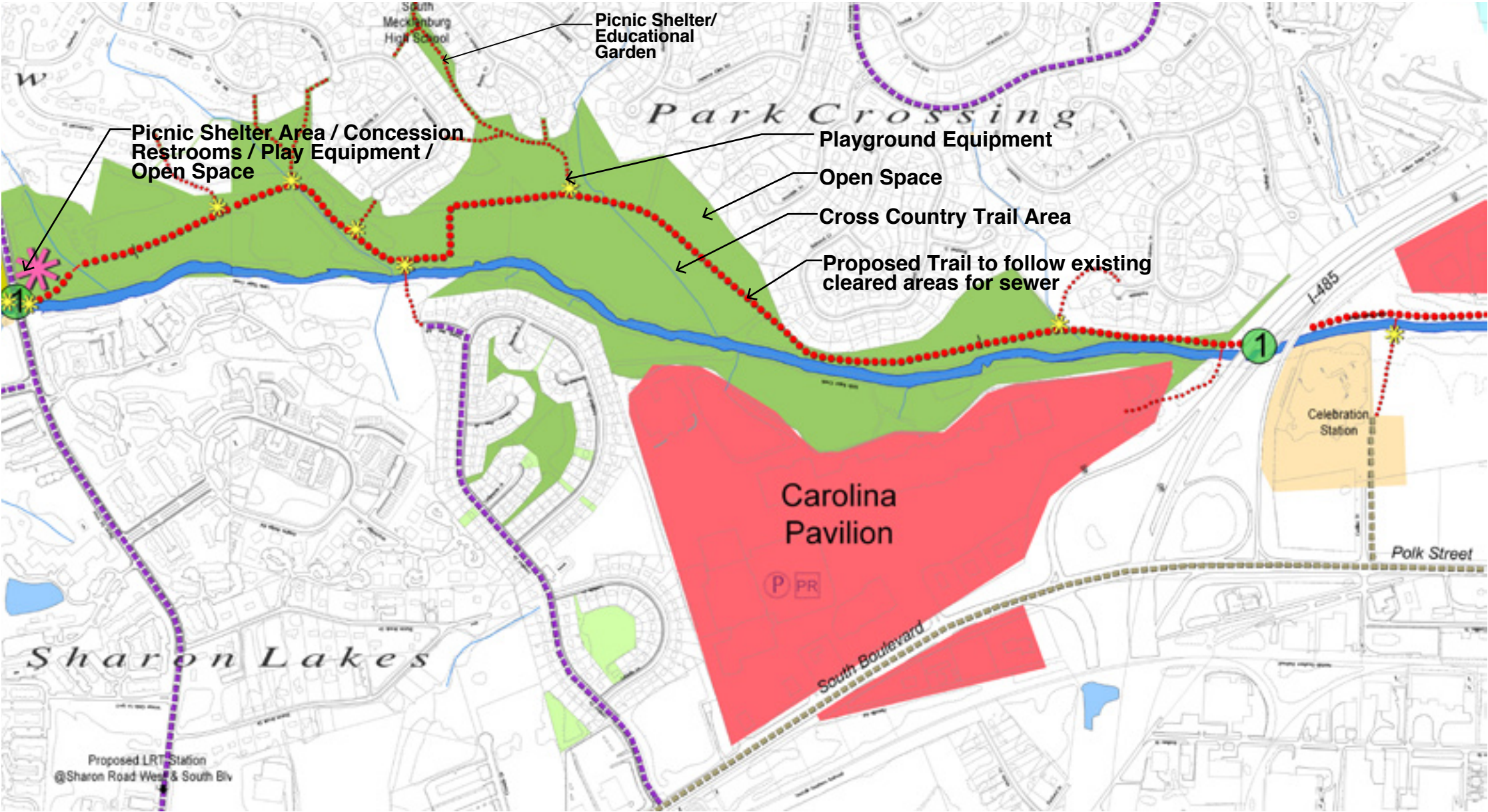
- Vehicular Bridge Improvements**
- Archdale / Sharon

- Structures**
- 2 Picnic Shelters- Sharon Road West/ South Meck High School
  - 1 Concession / Restroom- Sharon Road West

- Furnishings and Fixtures**
- 1 Drinking Fountain
  - 40 Benches
  - 20 Trash Receptacles
  - 1 Bike Rack
  - 1 Safety Phones

- Other**
- 2 Educational Community Gardens
  - 2 Play Equipment Areas
  - 2 Open Space Areas

- Land Acquisition**
- 12,800 LF County Owned Land
  - 7,200 LF To be Acquired by County



**Infrastructure Improvements**  
Pedestrian & bicycle improvements needed from Starmount Elementary School along Starbrook Drive, along Arrowood Road from the proposed LRT Station at South Boulevard, and along South Boulevard / Polk Street.



# 485 TO POLK STREET



## Existing Creek Condition

In this section of the creek, the floodplain is quite broad. It contains a large number of natural and mitigated wetlands. After it crosses under Highway 51, Little Sugar Creek retains much of its natural stream character and bottomland hardwoods habitat.

## Neighborhood Relationship

The dominant land-use pattern is commercial, occupied by a variety of businesses: hotels, retail stores, restaurants, gas stations, a landscape nursery, and an ice skating rink. Residents from across the region come to this area to shop at Carolina Place Mall and the Centrum Shopping Center. Visitors often choose this area's hotels since it is the commercial center for Pineville, suburbs of Charlotte, and communities along South Carolina's borders. Historic downtown Pineville is located at the end of this reach, with a wonderful small town feel, contrasting the big box development that dominates this reach. The downtown is home to antique shops, a coffee house, and restaurants along Main Street (Highway 51). Development along

this reach, with the exception of the historic area of downtown Pineville, was designed strictly for the automobile. A pedestrian or bicyclist would be very challenged to maneuver through the area. The greenway trail could play an enormous role in creating a spine for pedestrian connections and prompting this area to address larger connectivity problems.

## Landmarks

The Centrum Shopping Center  
Carolina Place Mall  
James K. Polk Memorial  
Downtown Pineville

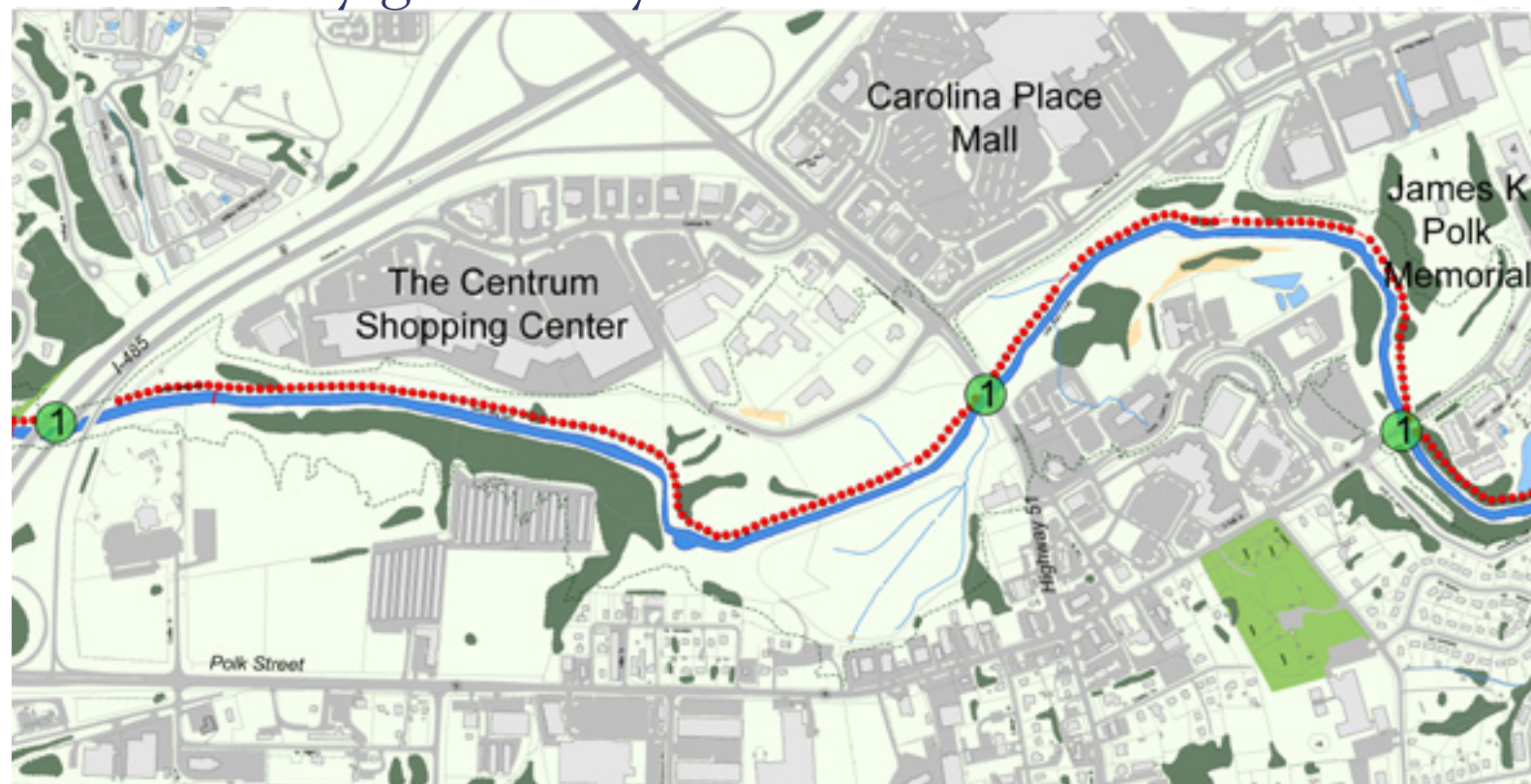
## Thoroughfares

Two very important thoroughfares cross the greenway trail in this reach: Interstate 485 and Highway 51. Interstate 485 is the future loop around Charlotte that will carry many commuters in and out of the city, which could be an important crossing to help introduce the trail to much of the public. Highway 51 is also a very important corridor that connects many neighborhoods around Charlotte and Pineville to a large commercial center. Both of these crossings will be addressed by passing the trail under bridges, below street level.

56

## community greenway

scale 1"= 1000'



## plan components

### Trail Improvements (8700 LF Trail)

8700 LF Primary Trail -Mix of 10' Asphalt & 10' Boardwalk  
950 LF Secondary Trail

2 Primary Trailheads  
5 Secondary Trailheads

### Signage

Way-finding Signage  
Informative Signage  
Regulatory Signage  
Mile Marker  
2 Kiosks

### Landscaping

Trail Enhancement

### Pedestrian and Vehicular Crossings

2 Underpasses

### Pedestrian Bridges

1 Pedestrian Bridges  
1 Pedestrian Bridge Improvements

### Vehicular Bridge Improvements

Highway 51

### Structures

1 Picnic Shelter- Polk Site  
1 Concession / Restroom- Polk Site

### Furnishings and Fixtures

1 Drinking Fountain  
20 Benches  
9 Trash Receptacles  
1 Bike Rack  
1 Safety Phone

### Other

1 Educational Garden - Polk Site

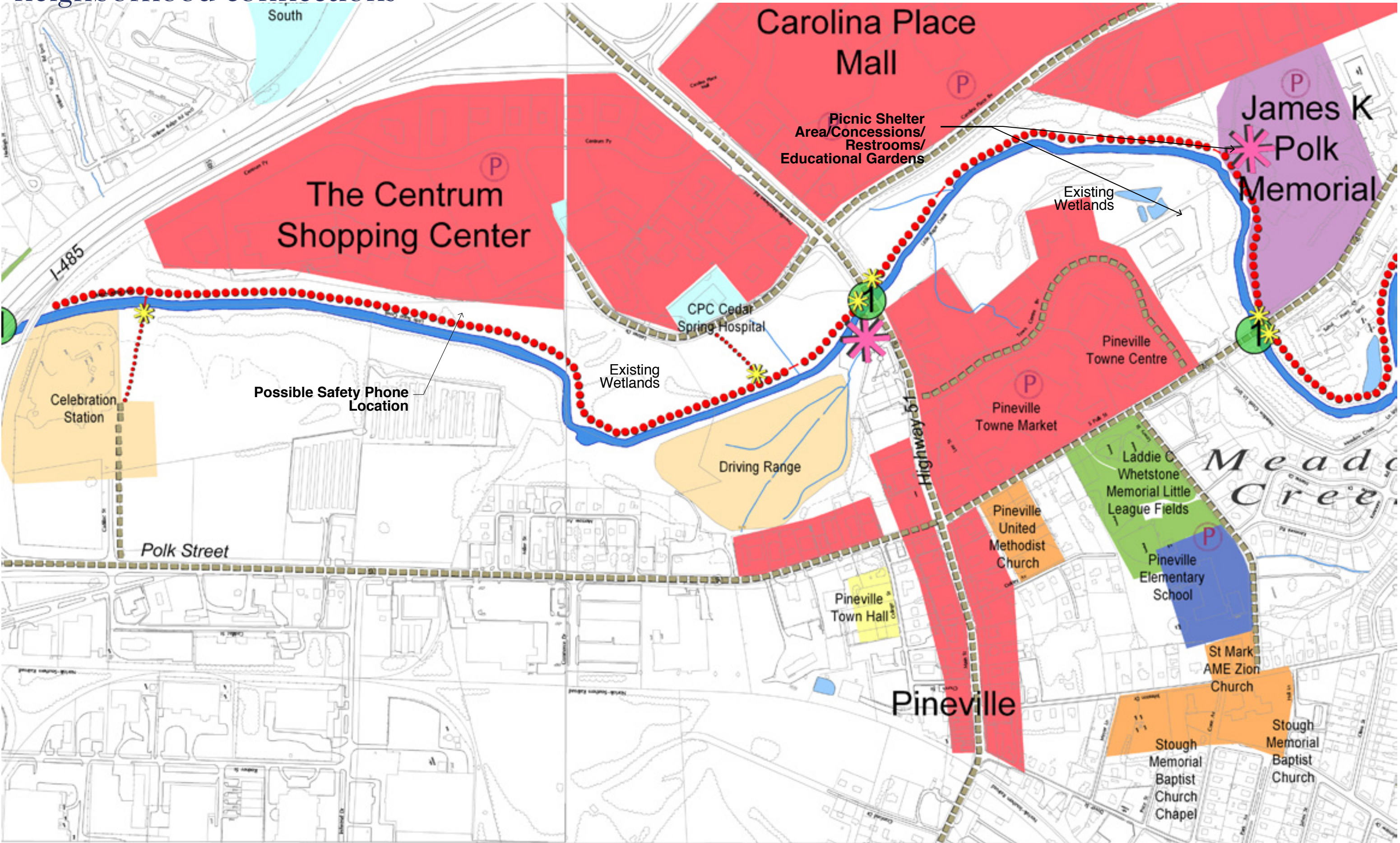
### Land Acquisition

8700 LF Land to be Acquired by County



neighborhood connections

scale 1"= 500'





# polk & pineville opportunity area

## Proposed Reach Character

One of the most exciting linkages the greenway would encourage would be between historic downtown Pineville and the James K. Polk Memorial. A greenway user could begin at either place and enjoy a day of antiquing, lunching at a cafe in Pineville, and strolling or biking to the Polk Center, which would receive exposure and publicity through the creation of the greenway, to learn about the history of early settlements in Mecklenburg County.

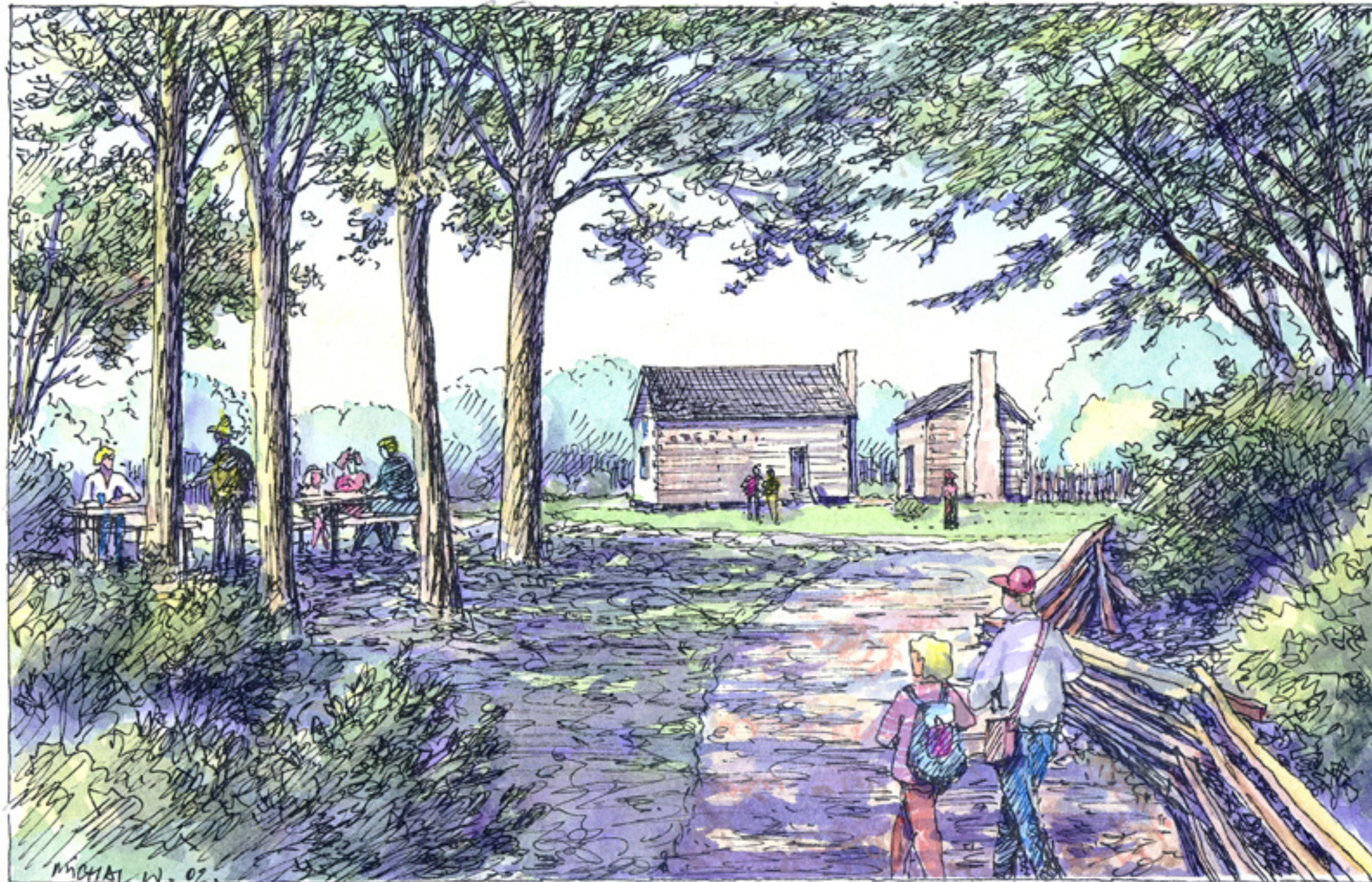
Alternatively, the day could begin at the James K. Polk Center with a family picnic or an outdoor cooking demonstration, followed by a bike ride over the boardwalk and through scenic wetlands to Pineville. A connection to the Lower McAlpine Creek Greenway and McMullen Creek Greenway can also be made via Polk Street.

This opportunity area has also been identified as a beginning or end point for a full day greenway experience.

58







### Infrastructure Improvements

Bicycle and pedestrian improvements are needed along Highway 51, Polk Street, Towne Center Boulevard, Carolina Place Boulevard, and into Carolina Place Mall.

Streetscape improvements are also needed along Polk Street in terms of pedestrian scaled lighting, seating nodes, and the addition of street trees, to enhance the connection from the greenway to downtown Pineville and to the Lower McAlpine Creek Greenway and then to the McMullen Creek Greenway.



# POLK STREET TO NC/SC LINE



## Existing Creek Condition

The last few miles of Little Sugar Creek just before the North Carolina/South Carolina State Line meander through bottomland hardwoods, much of which have remained undisturbed for decades. This area represents the largest undisturbed tract of land along Little Sugar Creek from its source at Derita to its confluence with Sugar Creek in South Carolina. The stream follows an unconstrained route with steep 30- to 80-foot banks that are vegetated extensively with Mountain Laurel and Rhododendrons.

## Neighborhood Relationship

Almost all of the properties that adjoin the creek in this reach are made up of multi-family and small town single-family residential in the heart of Pineville. The neighborhoods have a rich historical presence and strong community pride.

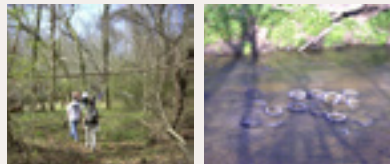
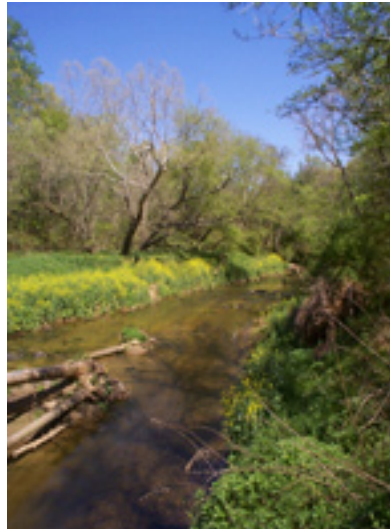
## Landmarks

Belle Johnson Community Center  
North Carolina/South Carolina State Line

## Thoroughfares

Polk Street is the only thoroughfare that crosses the trail in this reach.

60



## plan components

### Signage

Way-finding Signage  
Informative Signage  
Regulatory Signage  
Mile Markers  
1 Kiosk

### Landscaping

Trail Enhancement

### Street Crossings

1 Underpass

### Pedestrian Bridges

4 Pedestrian Bridges  
4 Pedestrian Bridge Improvements

### Vehicular Bridge Improvements

Polk Street

### Structures

1 Welcome Center  
2 Picnic Shelters at NC/SC line  
1 Concession / Restroom

### Furnishings and Fixtures

1 Drinking Fountain  
25 Benches  
11 Trash Receptacles  
1 Bike Rack  
1 Safety Phone

### Other

Wildlife Observation Overlooks

### Land Acquisition

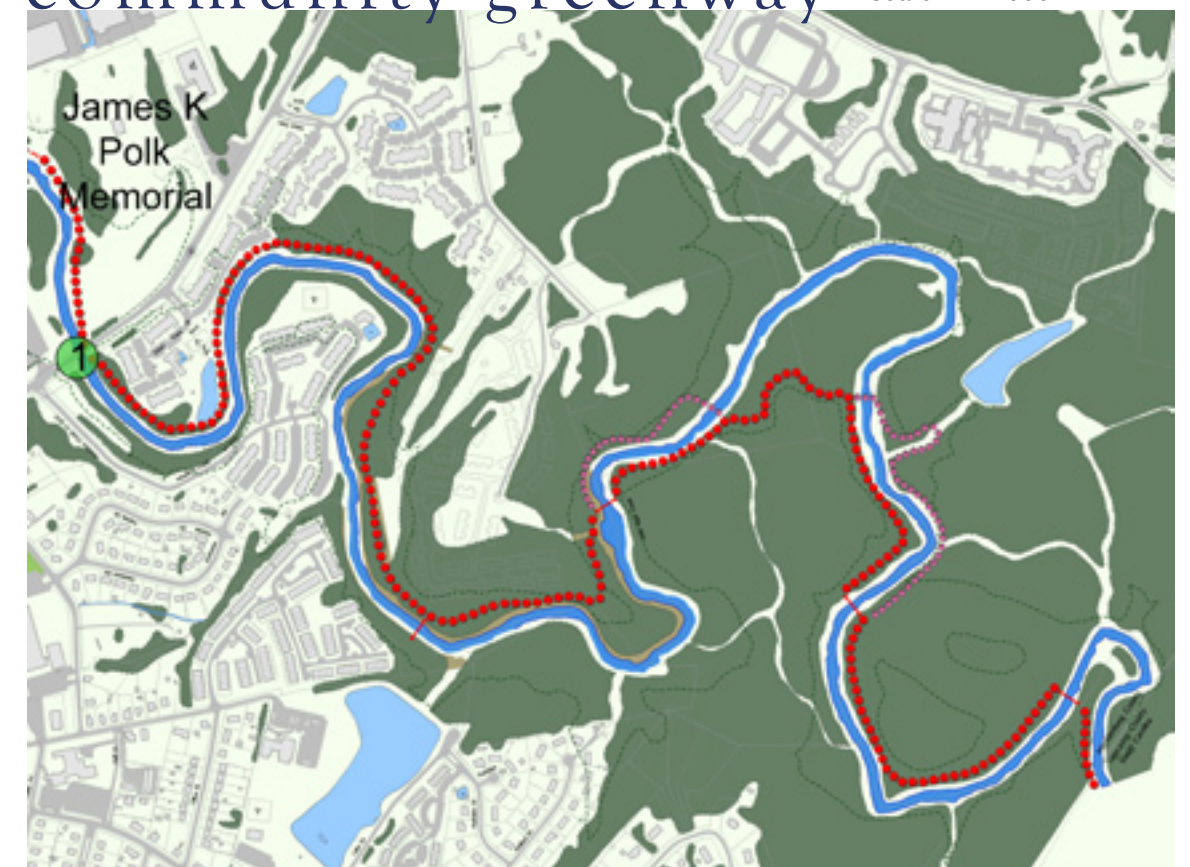
1,100 LF County Owned Land  
13,000 LF Land to be Acquired by County

### Trail Improvements (11,100 LF Trail)

11,100 LF Primary Trail mix of 10' Boardwalk & 10' Asphalt  
600 LF Secondary Trail  
3,000 LF Alternate Trail

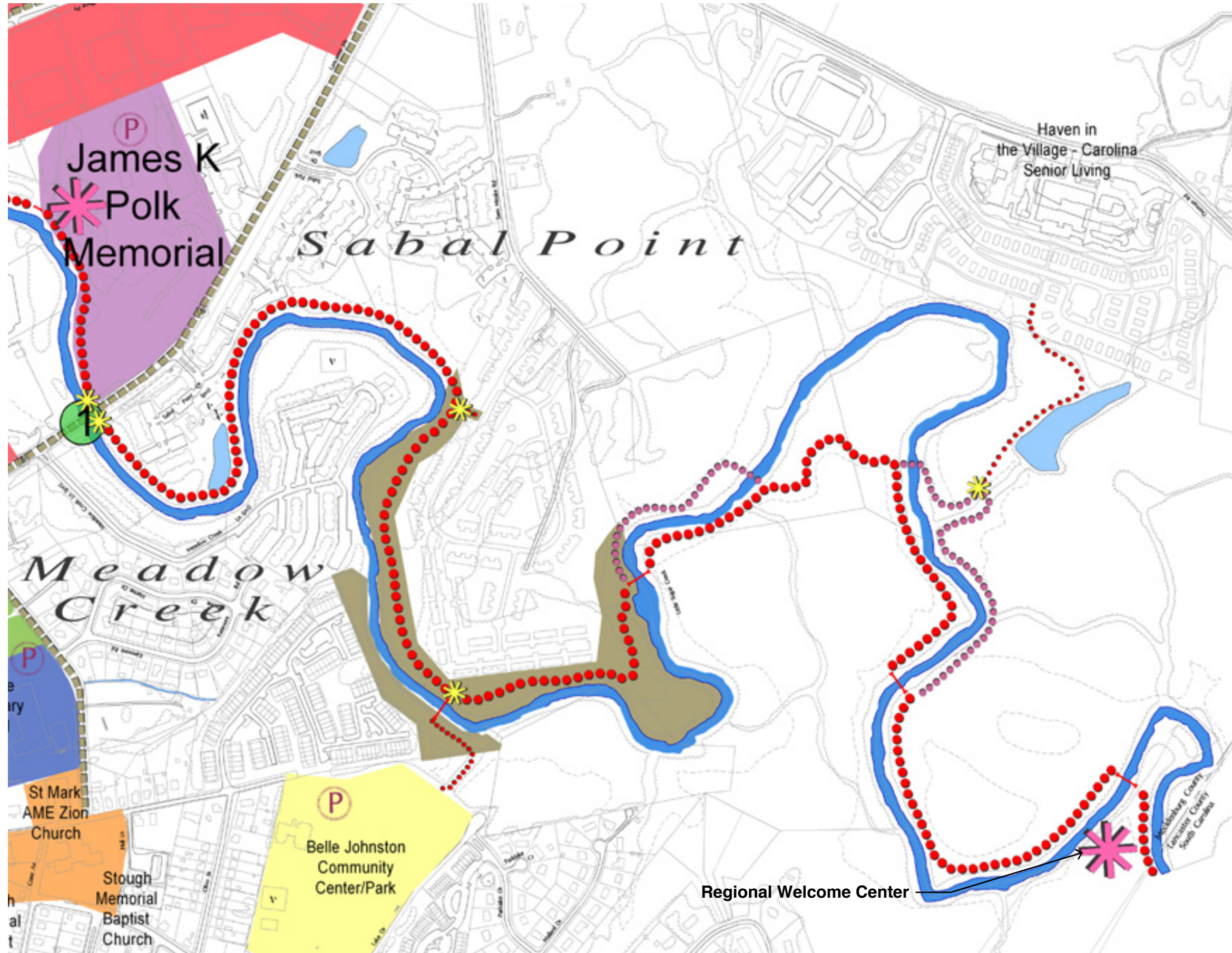
1 Primary Trailhead  
4 Secondary Trailheads

## community greenway scale 1"= 1000'





# neighborhood connections scale 1"= 500'





# nc/sc opportunity area



62

## Proposed Character

The proposed character of this reach and opportunity area is largely about celebrating connectivity and natural preservation.

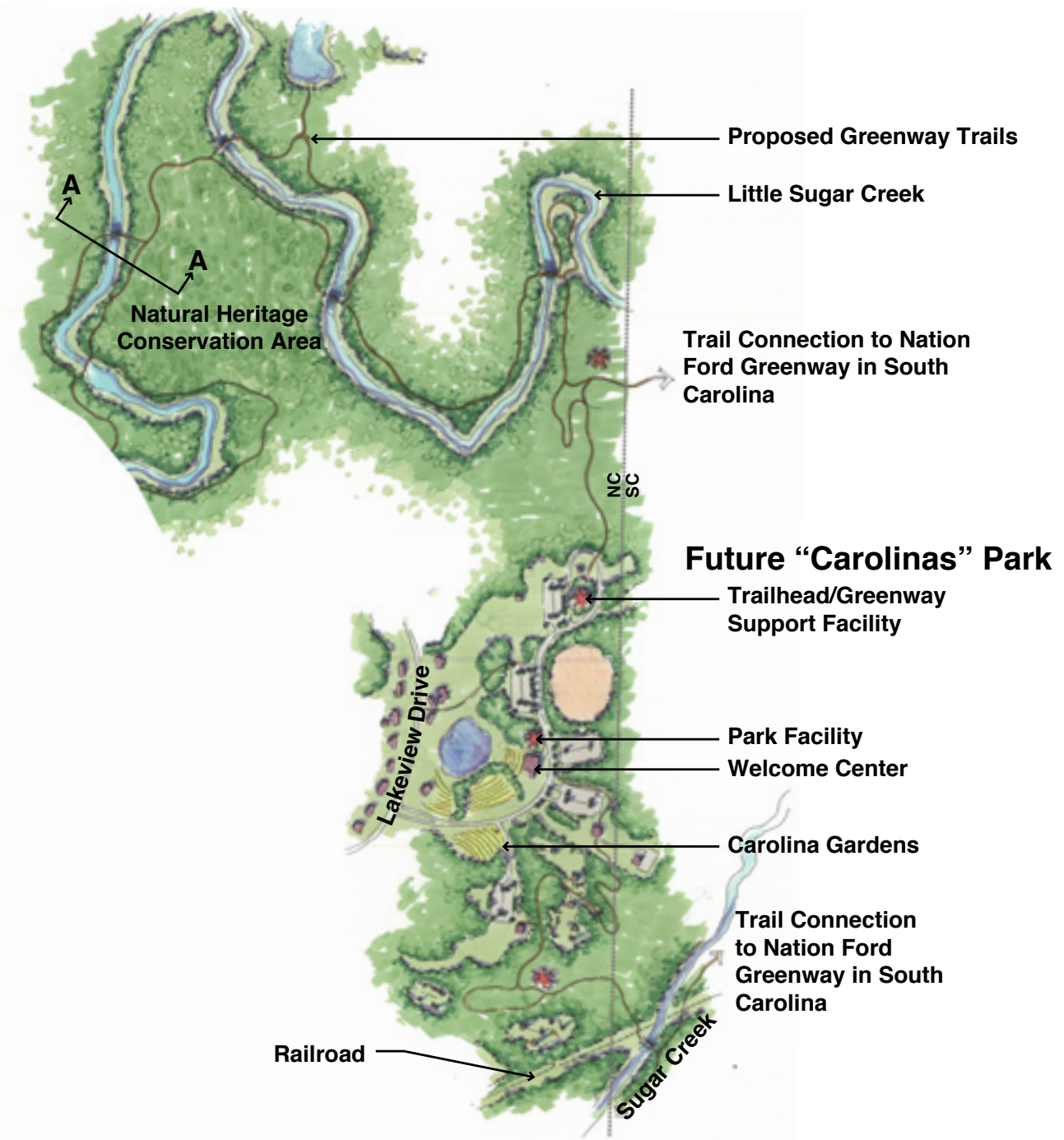
The connections in this reach are numerous and varied. There is an opportunity to create a bi-state Greenway Welcome Center, ideal as a starting or ending point for one's greenway experience. The welcome center would serve as a regional attraction and could also meaningfully celebrate the rich heritage of the Catawba and Cherokee Nations.

In this reach the connections to South Carolina's proposed Nation's Ford Greenway, the Anne Spring Close Greenway and to the Lower McAlpine Greenway in Mecklenburg County open up the opportunity for a much longer greenway trek, while creating large expanses of protected natural corridors.

As mentioned, in this reach, Little Sugar Creek has retained its natural meander and character. The adjacent uses have not encroached on the natural vegetation around the creek as in other areas (although its development is threatening.) The beauty of the natural environment in this reach merits protection from future development through conservation. Its natural character is a true asset to the community.



Section AA- Trail on both sides of Little Sugar Creek.





“Rural communities have the opportunity, in advance, to lay out the greenway systems that will protect the integrity of their system, rather than piecing together remnants of the urbanizing process later,”

Royal Commission on the Future Toronto Waterfront., p 183.



### Infrastructure Improvements

Pedestrian and bicycle improvements are needed along Polk Street.

Bridge improvements are needed on the Polk Street bridge where it crosses over the greenway.

Access to the Regional Park needs to be considered in more detail. An entrance from Dorman Road would be more ideal for a bi-state facility or from Lakeview Drive for a community-sized facility.